THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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JOSIAH TATUM,

PROPRIETOR AND PUBLISHER,

No. 50 North Fourth Street,

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Notice.

HAVING transferred our interest in the Farmers' Cabinet to JOSIAH TATUM, who has, for some time past, been our principal agent in the management of its concerns, and who is personally well known to a large number of our subscribers, we may be allowed to commend the publication to the continued favour of all who are interested in the vastly important operations of agriculture, and in the dissemination of the numerous agricultural improvements of the day.

It appears to us a question of grave import, whether a work of this character shall be well sustained by the public. To the practical agriculturist, who plants, and nurses, and gathers his crops with his own hand, literally eating his bread in the sweat of his face, it is obviously important that he should keep pace with others of his craft, in the amount and variety of his information. To the citizen also, who, for amusement or profit, gives a portion of his time and his care to his small lot, or his more extended farm, it is of consequence that he should be able to avail himself of the experience of others, and thus avoid the disappointments attendant on the prosecution of visionary theories; as well as the losses consequent on injudicious expenditures. To persons thus engaged, the several volumes of the Cabinet afford an amount of practical information, which we believe is not to be met with elsewhere, at the same price.

In retiring from the proprietorship of the Farmers' Cabinet, we flatter ourselves that we shall not be charged with viewing our own labours with undue complacency, if we express the hope that our subscribers are prepared to acknowledge, the pledge given two years ago, "that no reasonable exertions should be wanting on our part, to render the work worthy of the notice and support of the agricultural community," has been amply redeemed. We pass it into the hands of one, who, we believe, will do for it all that ourselves could do, and whose exertions will be untiring to make it creditable to himself, and useful to those for whom its pages are more particularly designed.

JOSIAH TATUM will collect the arrearages from subscribers, who will bear in mind, that though the sums due from them individually are small, the aggregate is of very considerable amount. We invite them to remit the small sums due by mail. We owe much to the kindness of postmasters, in franking such remittances, and we have pleasure in making the acknowledgment.

KIMBER & SHARPLESS.

4th mo. 15, 1842.

THIS being the first number of the Farmers' Cabinet, issued since it came into the hands of the present proprietor, it would seem proper that he should give an assurance to the subscribers, that no exertions on his part will be wanting, to make the work "creditable to himself, and useful to those for whom its pages are more particularly designed." Regularity in its appearance from the press, and promptness in its distribution, may also be relied upon.

The proprietor is entirely impressed with the belief, that in the publication of an agricultural journal like the Cabinet, he is spreading among his fellow-citizens a work, that may challenge comparison with those of the most useful class that issue from the periodical press.

The whole population of the world—"a thousand millions of men, are dependent for their very sustenance," upon the productions of the earth. Two hundred millions, probably, expend their daily toil in pursuits closely connected with the operations of agriculture,—the parent, and precursor, and most important, of all other arts.* Nine-tenths, perhaps, of the fixed capital of all civilized nations, is embarked in this one great pursuit. The proprietor of the Cabinet would perhaps, then, be excused, if he should hope he was not altogether undeserving of public regard, while giving his feeble aid to the multiplication of these productions, so essential to the subsistence of man. That in making two blades of

* See Johnston's Lectures on Agricultural Chemistry, Lect. 1.

grass to grow where only one had grown before—and in disseminating among those with whom he lives, and moves, and acts, a knowledge of the continually increasing facilities for satisfying the perpetual round of daily wants, the substantial welfare of his fellows was not less really promoted, than if his path had been with the conqueror—or his name blazoned to the world, as the inventor of a new mode for the destruction of his species. His, are *humble* duties, it is true—but their immediate bearing is upon the every-day comforts of every man. "Human science is progressive in all its branches." And to throw broadcast the "indications of existing knowledge," when upon that knowledge, or upon the results of it, the general comforts of life have their broad foundation, would seem particularly gratifying to one, who, while honestly endeavouring to promote his individual interest, was also willing to be found useful to others.

The proprietor would feel no ordinary gratification, if, previously to commencing the 7th volume, in the 8th month next, he should find his subscription list materially increased. Should each subscriber think so well of the Cabinet as to obtain another, the compliment inferred from it would indeed be of a *substantial* character; and would, on all hands, be accepted as a decided manifestation of an increasing and wholesome interest in the progress of agriculture. Josiah Tatum.

Philad., 5th mo. 15, 1842.

For the Farmers' Cabinet.

Hessian Fly.

Mr. Editor,—A writer in the Cabinet for December last remarks, at that time there were no Hessian flies in existence, although the seed-wheat that had been sown was as fully charged with their eggs as the firmest friend of the Morris school could desire. It is now the 9th day of May, and still the learned advocates of that system are without a single *subject* for anatomical purposes! The present spring has been healthy and favourable to the growth of wheat, and *therefore* there are no Hessian flies; what need is there of farther testimony to prove that the fly is the *effect* of disease and not the *cause*. As the writer very judiciously observes, "Is it not curious to observe that no complaint is now made of the Hessian fly, although the crops were sown as usual, at all times of the moon and at all seasons, whether early, late, or middling—before, as well as after the frosts that fell out; and without the least regard to all this, all is now as it should be!" What then becomes of the proposal, "to discontinue in toto, the cultivation of wheat throughout the country for several years, to starve out the fly!" So true is it that "man appoints, but God disappoints." To every one who keeps potted plants in their windows, this theory must be self-evident, for a cold wind will fill them with animalculæ in comparatively a very few hours; but before that time, the perspiration of the juices by the pores of the leaves—the real honey-dew, which is generally mistaken for the excrements of these minute parasites—will teach them that the disease arises from *impeded circulation*, which is *followed*, not *preceded by*, animal existence. But the thing is too plain not to be perceived with half an eye, while the simplicity of the system is the perfection of Nature, who never works but by the plainest and shortest rules, which "he that runs may read." We have, then, only mistaken the *effect* for the *cause*—a very common error throughout the chapter of life. P.

For the Farmers' Cabinet.

A Farmer in Distress.

A Farmer in a neighbouring county, who had been *dozing* for twenty or thirty years, and had made no improvement by fertilizing his fields, but had gone on the old-fashioned plan of reducing the staple of his soil, *waked up* a few years since, and limed the whole of his farm thoroughly, and that with magnesian lime too. Now, what do you think has been the consequence of this proceeding? A few days since, with a sorrowful countenance he informed the writer of this, that he had no pasture for his cows, and should not have till after harvest. The reason of so extraordinary a circumstance was asked; when he stated, that the field which, according to his usual rotation of crops would have been devoted to pasture, was so thickly set with grass, of such a luxuriant growth, that he had determined to keep it for mowing, in addition to his other mowing grounds. He, of course, has to feed on hay, and soil his cattle till after harvest; and this disaster has befallen him in consequence of liming his land and sowing grass seed much thicker than formerly! The plain fact is, that he has grown so much grass by his improved system, that he has no pasture; his fields are all mowing ground.

If the writers on the deleterious effects of magnesian lime would travel through Bucks, Montgomery, Delaware, Chester, and Lancaster counties, they would witness effects of a similar kind with the above, on thousands of acres of land; land which, before the application of lime, produced but very scanty pasturage, but now is first-rate mowing ground. A.

A young beast may eat well when half fat, but an old cow half fat is not eatable, for the whole body of such an animal ought to be filled with new juices.

For the Farmers' Cabinet.

Lime as a Manure.

"Let honour be given to whom honour is due."

In the 61st number of the American Journal of Science, is a review of Ruffin's Essay on calcareous manures, in which the writer, after complimenting the policy of the founder of Pennsylvania in fixing the agriculturist in the neighbourhood of the merchant and manufacturer — one consequence of which he asserts is, that the farmers in the neighbourhood of Philadelphia are the only settlers of the English blood who have resisted the migratory habits of other parts of the country — goes on to state, that "a similar dread of change influenced the Germans who followed the Quakers, in the occupation of the more remote districts of Pennsylvania; and while bread stuffs naturally became the only profitable objects of culture, they avoided the exhaustion which their growth produced in other districts, by a *valuable secret they brought with them from Europe.* We call it a secret, for those of other blood *who see it* used in their presence, *do not discover its value.* By this simple but efficient aid the farms of Pennsylvania have generally maintained their original character for fertility, and in some places have increased in products beyond the early crops that are given by the proverbial energy of a virgin soil." And "in the United States the use of lime is limited to the districts in which the descendants of the Germans who settled in Pennsylvania, have introduced the method they brought from their native country."

These sweeping declarations as to who was entitled to the honour of first introducing the use of lime as a manure in the United States, and particularly in Pennsylvania, were so contrary to all my impressions and previously formed opinions on the subject, that they strongly arrested my attention on first reading them, and induced a more particular inquiry, which has resulted in the conviction that their correctness is very doubtful, or at least that they are stated in a much too loose and unqualified manner. By the more remote districts of Pennsylvania, we are to understand, I presume, those districts within an hundred miles of Philadelphia; because it is a well-known fact that the rest of the state, with the exception, perhaps, of some districts in the vicinity of Pittsburg, was either in a wilderness state or in that incipient stage of backwoods cultivation, in which the use of dung, much less of lime, was scarcely known, until the use of lime as a manure had spread to a great extent in the south-eastern part of the state. The parts of the state, then, in which the German population so far abounded at that epoch, as to give a tone to society, or a direction to agricultural management, and to which the remarks of the writer are at all applicable, must be confined to parts of the counties of York, Lancaster, Berks, Northampton, Bucks, Montgomery, and Chester. In all these the Germans have, or have had, considerable settlements; yet large districts in them are settled, and always have been, by people of other blood. The Germans are a people little given to innovation, but remarkably tenacious of old and long established habits and customs. No people follow in the footsteps of their forefathers more implicitly than they do. Hence, if they had once experienced the value of lime as a manure in this country, they would never have abandoned its use. If they really brought the secret of the use of lime as a manure to this from their native country—a fact of which I am somewhat doubtful, as I have never seen any evidence of it — it was most probably lost, as most systems of European management, brought with the first settlers, were—in the new positions they found themselves in; cultivating a virgin soil teeming with exuberant fertility, where the difficulty was not so much to raise a crop as to dispose of it afterwards: and hence the knowledge of the first settlers was lost to their descendants when the proper time arrived for its application, and all was to learn over again. Can any one trace the first regular use of lime to them? I confess I have not been able to do so. I was many years engaged to some extent in burning and selling lime for agricultural and other purposes in the county of Chester, and so far as my knowledge extends, the use of it among them was much less general than with others: they seemed to view it rather with indifference. Among the Germans of Lancaster county the use of lime was by no means general thirty years ago, whatever it may be now, as I know by personal observation; yet there are the descendants of the very Palatines who brought the secret of its use to this country, according to the statements of the author above quoted.

In the limestone valley of Kishaquohillas, in Mifflin county, a considerable portion of the farmers are of German descent, many of them emigrants from the counties of Chester and Lancaster; yet so little had they done either by precept or example in introducing lime as a manure, that when on a visit there some years ago, many of their neighbours applied to me with eagerness for information on the subject, and evinced by the minuteness of their inquiries a total ignorance of the practical part of the business, which could not, or at least need not, have been the case if their German neighbours had fully understood the matter and applied their knowledge to practice. The county of Berks is, and always has

been, inhabited principally by the German race. Its first settlement commenced more than an hundred years ago, yet the gentleman is still alive who was mainly instrumental in introducing the use of lime as a manure among them. I had the facts from his own lips. He was an emigrant from Chester county near fifty years ago, where he had witnessed the agricultural value of the article. He found its use practically unknown among the (then) present generation of German farmers, and they received his accounts of its powerful effects in improving soils with the utmost incredulity; and nothing but the actual proof he exhibited to them by his practice could induce them to adopt its use. A considerable portion of the farmers of the upper parts of Montgomery county are of the German race. A gentleman, a native of it, now holding an office in the custom-house of Philadelphia, informed me that when he commenced farming in that district some years ago, lime was but very sparingly used as a manure, and that he was among the first to introduce its systematic use as a part of regular husbandry.

I have thus thrown loosely together such facts and observations, derived from personal knowledge, or sources on which I can rely, as have led me to the conclusion that the author is incorrect in the assertions quoted in the beginning of this article. I have no wish to detract anything from the well-earned fame of our German farmers, neither am I willing to award them honours to which they are not entitled. I believe the first use of lime as a manure in Pennsylvania, was on the soils covering, and partly derived from, the primary rocks lying south-east of the great limestone valley of Chester county, a district in which the Germans were always but a small part of the population. But this is rather a conjecture than anything else, at present. Can any of your readers in that part of the state furnish information on the subject? I am well aware that this is more a matter of curiosity than practical utility; but still its discussion may serve to give variety to the pages of the Cabinet, or fill up a corner when you are hard pushed by the printer for *copy*.

S. Lewis.

Mechanism of the Eye.

Birds flying in the air, and meeting with many obstacles, as branches and leaves of trees, require to have their eyes sometimes as flat as possible for protection, but sometimes as round as possible, that they may see the small objects, flies and other insects, which they are chasing through the air, and which they pursue with the most unerring certainty; and this could only be accomplished by giving them a power of suddenly changing the form of their eyes. Accordingly, there is a set of hard scales placed on the outer coat of their eye, round the place where the light enters, and over these scales are drawn the muscles or fibres by which motion is communicated; so that by acting with these muscles the bird can press the scales and squeeze the natural magnifier of the eye into a round shape when it wishes to follow an insect through the air, and can relax the scales in order to flatten the eye again when it would see a distant object, or move safely through leaves and twigs. This power of altering the shape of the eye is possessed by birds of prey in a very remarkable degree. They can thus see the smallest objects close to them, and can yet discern large bodies at vast distances, as a carcass stretched upon the plain, or a dying fish afloat on the water: and a singular provision is made for keeping the surface of the bird's eye clean—for wiping the glass of the instrument as it were—and also for protecting it while rapidly flying through the air without hindering the sight. Birds are, for these purposes, furnished with a third eyelid, a fine membrane or skin, which is constantly moved very rapidly over the eyeball by two muscles placed in the back of the eye; one of these muscles ending in a loop, the other in a string which goes through the loop, and is fixed in the corner of the membrane, to pull it backward and forward.

And a third eyelid of the same kind is found in the horse, and is called the *haw*; it is moistened with a pulpy substance or mucilage to take hold of the dust on the eyeball and wipe it clear off, so that the eye is hardly ever seen with anything upon it, though greatly exposed from its size and posture. The swift motion of the haw is given to it by a gristly, elastic substance, placed between the eyeball and socket, and striking obliquely, so as to drive the haw with great velocity over the eye, and then let it come back as quickly. Ignorant persons, when this haw is inflamed from cold, and swells so as to *appear* — which it never does in a healthy state — often mistake it for an imperfection, and cut it off; so nearly do ignorance and cruelty produce the same mischief.—*Brougham.*

"The man that misses sunrise loses the sweetest part of his existence. I love to watch the first tear that glistens in the opening eye of morning — the silent song the flowers breathe — the thrilling choir of the woodland minstrels — to which the modest brook trickles applause — these, swelling out the sweetest chord of sweet creation's matins, seem to pour some soft and merry tale into the daylight's ear, as if the world had dreamed a happy thing, and now smiled o'er the telling of it!"

For the Farmers' Cabinet.

Granary — Preservation of Life.

Mr. Editor,—On a late visit to a branch of the Cooper family, New Jersey, I observed that the granary, or place for stowing away grain of different descriptions, was fitted up with binns in the shape of very large and strong iron-bound casks of the usual shape; and in these the wheat, &c., was preserved for any period, no matter how long, without fear of weevil, grain-worm, or any other species of vermin, or damp and mouldiness; the grain being introduced by means of a funnel through the bung-hole, which, when the cask is full, is very carefully closed and made air-tight; the casks also being kept in repair and perfectly air-tight, the hoops being driven occasionally to cause them to become so. Now by this very simple arrangement, the whole crop of grain on a farm may be preserved for years, as perfectly free from dampness or disease of any kind, as though it had been kiln-dried; the convenience of stowage being as great as in open binns; the casks standing on low tressels or sleepers, admitting a bushel measure under, they can be rolled on to the bung; or the grain might be drawn off by a large tap made for the purpose.

By these means, we see how perfectly free from injury of any description could grain and seeds of every kind be brought by shipping from any part of the world: it is but to enclose them in stout air-tight casks instead of boxes, bags, or loose barrels, and no injury need be apprehended from the heat of the hold or the leakage of the vessel. I declare it seems wonderful that this mode of packing has not been universally adopted; the simplicity of the arrangement must be the cause of its having been overlooked. And this mode of packing would be efficient in the preservation of many other articles, which, if too bulky for admission through the bung-hole, could be performed by removing one of the heads and replacing it when the cask was full, seeing that the hoops were driven so as to insure perfect closeness. Thus might fruit-trees, flowers, and fruit itself, be preserved during long voyages, and we could be supplied with the choicest specimens of either, from the most distant parts of the globe. I very well remember that when Mr. Zollikofer received his remarkably fine sample of seed cone-wheat from England the last year, that it smelt very musty, and handled wet and clammy in the bags in which it had been shipped; exhibiting every sign of having undergone fermentation during the passage: and I find, upon inquiry, that a large portion of the seed did not vegetate when sown in the autumn, the failure arising, no doubt, from this cause. And this leads to the question, is not the almost proverbial ill success attending the growing crops of beets, &c., from imported seed, to be thus accounted for, the general mode of packing for ship-board being in loose barrels or bags, exposed to the damp and putrid atmosphere of the hold of the vessel—which is often leaky—during a passage of sometimes 80 or 90 days? All which evil could be prevented by merely packing in perfectly air-tight casks—a consideration of very great moment, but one that by its simplicity will be very apt to be disregarded, like many other things of the greatest and most vital importance, one of which I will just mention. It is *the snagging of steamboats on the western rivers*, which could be prevented merely by plating their bows with sheets of boiler-iron, sufficiently strong to withstand the force with which the boat is propelled, and which would in almost every instance be comparatively slight; for, as it would not happen, perhaps, once in a thousand times, that the blow or collision would take place *point-blank*, the boat would be merely driven out of her course, the snag gliding along the iron plates; and thus she would be made to escape a *consequence*, by which millions of dollars and thousands of lives are sent to destruction; or she might be brought up without injury, provided the plates were strong enough to withstand the shock: at all events, the saving of life and property would be almost incalculable, at a charge of—comparatively nothing! Now, I would just ask, is it possible that those who are continually exposed to such frightful accidents and losses—of whom there are many thousands—can have been *sleeping* over so simple a contrivance to insure their safety, for such a number of years?

There is just one other evil—an evil which is peculiarly the besetting sin of our country—I mean, the shedding of blood in duels—which might, I think, be prevented, by as simple and *natural* a contrivance. Now, I dare say there will always be duelling, for it seems to be the only safety-valve with which some honourable gentlemen are furnished for the purpose of *letting off steam*. Well, let them indulge their propensity to their heart's-blood content; my object is, merely to prevent any injury that might arise to either party, the *satisfaction* sought being amply sufficient to cure the largest wound in any man's honour. My proposal is simply this—on coming to the ground, let each *principal*—not *second*—load his own weapon, and magnanimously exchange with his antagonist: think you that either would be so great a fool as not to be careful to slip the ball on one side, when he knew that, else, the very next moment it would be hurled at his own head? It might, in this arrangement, be necessary to restrict the belligerents

to — say half-a-dozen shots each — else they might choose to keep the seconds all day on the ground, and serious injury might arise from taking cold.

HUMANITAS.

4th mo. 15, 1842.

For the Farmers' Cabinet.

Ignorance and Prejudice.

IGNORANCE and prejudice are twin brothers. Ignorance is often stimulated to a desire for knowledge, but prejudice takes him by the hand, and if his physical constitution should happen to be the stronger (which is often the case) he leads his companion from his purpose. If he desires to become acquainted with the physical laws that govern the animal and vegetable world, prejudice tells him that this is searching into the works of Providence, and "his ways are past finding out." If he lift his eyes to the starry firmament, and feel an emotion within himself, a desire for an acquaintance with astronomy — prejudice comes forward and gravely asserts, that the study of the stars, and the pretended calculations of their distances, is all presumption, and a perplexing of the mind with things that it has pleased Providence to exclude from man's understanding; that we are not benefited by these researches of visionary men; they neither feed or clothe us, nor do they dispense comforts to the poor; and therefore, it is not our proper business. If ignorance takes up history, and is in a fair way of extracting a moral from its pages, prejudice tells him it is folly to record the deeds of men, for "they are prone to evil as the sparks fly upward."

It is the same Ignorance governed by prejudice, that checks the agricultural advancement of our country; he is horror-stricken at scientific pursuits; and looks upon "book farming" as the bane of practical knowledge, because he essayed to cultivate his corn according to certain rules laid down in the Farmers' Cabinet, but failed for the want of a little scientific knowledge; therefore he denounces the whole system of recorded experience, when he would not hesitate to *ask* of his neighbour the cause of the superior growth of his fruit-tree and vine. Thus we find prejudice besetting the ignorant man on every side, and he resolves to grope in the shade of his own limited experience, spurning to be guided by the light of the agricultural science of the day.

The light of *science* to the mind, is like the light of the sun to our visual organ, the eye; by the aid of the latter, we are enabled, through analogy, to judge of the form and properties of distant objects, without bringing them to the test of all our senses. So with the light of science, we are enabled to judge, through analogy, of the properties of untried things, or things viewed only in the distance.

Now, from the advantage that herd's-grass possesses over many others, it should be brought into more general use; but *prejudice* has arisen against it, on account of a reputed inferiority as hay for stock. This must have arisen wholly from its use, when mown from its native bottom or sedimentary deposit, where it is generally left to ripen its seed before cut; but who thinks of making use of clover or timothy hay under the same circumstances? It is generally thrown into the barn-yard as useless. Herd's-grass, when grown on a high, dry soil, under culture of the plough, and cut in the proper season, or just after the pollen has fallen from the head, makes a sweet and nutritious hay, not in the least inferior to the best clover or timothy. I have known horses, with moderate working, to be kept in good plight through the winter on herd's-grass alone: when properly cured (and few of the grasses are so readily preserved), it makes a cleaner and softer hay than either timothy or clover. It has a decided advantage in sustaining close cropping and pasturing. Mowing in dry weather is almost certain death to a timothy sward, but herd's-grass is tenacious of the soil, producing a thick after-math, highly beneficial in protecting the soil through the winter; and in the spring, turns in to great advantage for the growth of corn. I am acquainted with a district where it has got into general use on upland sown to clover simply, or clover and timothy; on heavy lands, the dry weather and frosts will have destroyed nearly all but the herd's-grass the second year, but it has got firm hold, and will produce an excellent crop. One of the first persons to make use of it in this way, was in the habit of raising an extra crop of corn to the accustomed routine, without any additional dressing with manure: his neighbours long eyed him, with the prospect of an impoverished soil; but from his continued success, they were led to inquire into the cause, and attributed it to the heavy herd's-grass sward, which protected and decomposed in his soil, and from this convincement fell into the practice.

I have regretted to see our native productions, those furnishing our home markets, give way to foreign importations. Silk has latterly almost wholly taken place of the durable fur hat recently worn, and chiefly manufactured from the muskrat. This is to be lamented for two reasons — first, it makes a demand for an article which we largely import at a heavy cost; and secondly, it taxes our farmers with the continuance of a nuisance, particularly destructive to dikes and embanked meadows. The skins of these ani-

mals, which a few years since commanded from 25 to 31 cents each, in market, will now scarce sell at ten cents apiece; thus depriving home industry of a profitable employment during the winter season, and paying the cash to foreign traders. As the fashions govern in these respects, and our fashions are governed by our enterprising mechanics and tradesmen, it is to these that we must look for a reform in this matter; and he who would again show this invaluable article before the public, in agreeable and serviceable forms and shapes as clothing, would deserve a medal for his public service, and the good wishes and patronage of all those who own "musk-rats or embanked meadows."

TARIFF.

Third mo. 23d, 1842.

Rotation in Forests.

EVERY man who has seen half a century or more, and has spent all or a part of his days in the country, in the neighbourhood of forests, and has been a careful observer of the progress and productions of nature, has seen a succession of the different species of forest trees, or varieties of the same species succeed each other on the same tract of land without man's aid or interference.

When the first settlers took possession of the soil which we now occupy, they found it, in some places, covered with the different kinds of oak and other hard wood, and in other places with the pine varieties and other evergreens. After the removal of the original growth of hard wood, we have found it succeeded by evergreens, if evergreens composed the original growth, succeeded by some of the varieties of hard wood, or of a different variety of the evergreen from the original growth. In the state of Maine, I have seen, on the removal of a heavy growth of beech, birch and maple, immense crops of hemlocks springing up; and in my own neighbourhood, on chopping off an oak growth, a pitchpine one has succeeded, and on cutting that off, white pines have sprung up in multitudes.

Every kind of soil has a constant tendency at production, even our most grain-worn fields, on suffering them to lie without cropping, are soon filled with young pines, which spring up in such numbers as to surprise us. The Almighty formed the soil for activity, as well as the animals which inhabit it, and it being destitute of the fertilizing power which produces grain, is no hindrance to the growth of the pine varieties. The above remarks suggest that every vegetable and every distinct species of tree, with all their varieties, flourish in consequence of a specific fertilizing principle imbibed from the earth by a peculiar set of absorbent vessels adapted to the nature and wants of each, which cause their gradual growth and ultimate maturity; and that on the exhaustion of the nutriment which produces one distinct species of vegetable or tree, the nutritive principle which is required for the growth of other species is left unimpaired in the soil to be applied when called for by others, and that the earth, while in the progress of exhaustion by the production of one species of trees or vegetables, is accumulating a supply of nutrition which will be required by trees and vegetables of other species to promote their growth. The nourishing principle which produces the varieties of hard wood has no affinity for the evergreens, and therefore the evergreens will flourish after the hard wood growth has done growing, in consequence of the soil being exhausted of that nourishment which produced it, and so one variety of the evergreen will succeed another for the same cause. I have known a field completely exhausted of its power to produce corn by a repetition of that crop in succession, and the same field being laid down to grass has produced fine crops of hay.

We frequently hear complaints of the "running out," as it is called, of many kinds of vegetables, and the deterioration is supposed to be owing to a degeneracy of the seeds sown, when in fact it is caused by a want of the knowledge of rotation, and putting this knowledge into practice. We are taught the doctrine of rotation by nature herself in the arrangement which she makes in the natural forests, if we would but observe her laws.

All vegetables exhaust the soil in proportion to the nourishment which they afford: oats, which are so nourishing to horses, exhaust the soil more than any root crop with which I am acquainted. I have seen four or five good crops of corn and rye grow upon pine plains in succession, without manure, when a heavy growth had lately been taken off, and but little brush left on the ground to make ashes, which is evidence sufficient to convince any one that the same kind of food which feeds the forest is not the favourite of the different kinds of grain.

Thus it seems that every kind of vegetable extracts some peculiar principle of nutrition from the earth congenial to its own wants, and differing from that required by others, and this accounts for the necessity of rotation in raising our crops, if we would wish to realize the greatest profit from our labour.—*Cult.*

THERE is no quality which commands more respect than *integrity*—none, more freedom and independence than *economy:* these, with *industry*, are all that a man needs to depend upon.

For the Farmers' Cabinet.

Milk-Houses.

Mr. Editor,—I am induced to make the following communication in the hope of being able to obtain from some of your numerous readers who are *practical men*, information on a subject of which I am in practice entirely ignorant—a subject, however, which is certainly of great importance to every farmer; and I therefore believe the information, if communicated, would be very acceptable to all.

The information which I desire is, the best plan for a milk-house, which has been reduced to practice. Having myself no convenient spring, I wish to be informed by those who have tried it, whether such a house can be built under ground to advantage? If so, how it is to be done? Whether it ought to be made so as to have a communication with the well? Whether it will require air, and if so, how it is to be aired? I have been informed that in a milk-house built under ground, no water ought ever to be admitted, except what is scalding hot, and then everything should be rubbed till perfectly dry. If this were done, would not a communication with the external air be unnecessary? In other words, is it not the evaporation from the water which makes airing necessary? Any communication with the external air would have a tendency to destroy the otherwise equable temperature of such a house entirely under ground, and would be better to be dispensed with, if the milk and butter could be kept sweet without it. Of this I wish to be informed.

I have in my mind a plan for such a house, which I wish to submit for the purpose of obtaining information as to its practicability. My plan is, to build a milk-house, an outhouse for servants, and a smoke-house, all under one roof. Let the building be about 22 by 14 feet, all of stone; the basement story to be all under ground, and to be divided into two apartments, by a stone wall in the middle, one of which is to be the milk-house, the entrance to which to be through the other apartment; this apartment to be for salting meat; in and from it a chimney is to go up to the third story, in which the meat is to be hung for smoking; the fire to be kindled in the fire-place in the basement. The room between these two to be for servants, or for members of the family, as occasion may require. There can be no doubt this plan would answer well for a smoke-house, the fire being so far from the meat: and the only doubt is, would the lower story make a good milk-house? There would be no admission of air, except by the door, unless the story were extended a foot or 18 inches above the level of the ground, so that a window could be made on each side, which would also admit light, otherwise a candle would have to be taken in.

Will some of your readers who have had experience on this subject, inform the writer whether this plan will answer; and if not, what plan will answer? You will see I have asked many questions, but if you will look at my signature, you will perceive I have heretofore sent you some communications for the Cabinet of which you were pleased to think well. I therefore have some claim upon the readers of the Cabinet. B.

March 28, 1842.

Pig Oil versus Whale Oil.

Recent applications of the knowledge which chemistry has given in regard to the constituent principles of fats and oils, will prove to be of advantage to the pig breeders of the far west. Mr. Ellsworth, in his report, says: "The use of lard instead of oil, for lamps of a peculiar construction, has been heretofore attempted with good success, as an article of economy. It has even been adopted in the light-houses in Canada on the lakes, and is said to burn longer and free from smoke, while the cost of the article is stated to be but about one-third the cost of sperm oil. But it has now been discovered that oil equal to sperm can be easily extracted from lard, at great advantage, and that it is superior to lard for burning, without the necessity of a copper-tubed lamp: eight pounds of lard equal in weight to one gallon of sperm oil. The whole of this is converted into oil, and stearine, an article of which candles that are a good substitute for spermaceti can be made; allowing, then, for the value of the stearine above the oil; and it may be surely calculated that when lard is six cents per pound, as it now is but four or five cents at the west, a gallon of oil can be afforded there for fifty cents, since the candles from the stearine will sell for from twenty-five to thirty cents per pound."

We do not as yet know exactly the latest improved mode of separating the oil and stearine from lard, but even if we have to give twelve cents per pound for lard, and it will uniformly yield the amount of oil and stearine as above, it will bring the oil to $1 a gallon. This is much less than the best sperm costs us, and it would be good economy to fat a porker for the special purpose of trimming the lamps with. As soon as we learn more of this thing, we will lay it before our readers; for the more *light* we can give them at the cheapest rate, the better for all concerned. —*Maine Farmer.*

Man *proposes*, but God *disposes*.

THE OLD CRAVEN BULL.

In the district of Craven, a fertile corner of the West Riding of Yorkshire, bordering on Lancashire, there has been, from the earliest records of British agriculture, a peculiar and valuable breed of cattle. They were distinguished from the home-breeds of other counties by a disproportionate length of horn, and in the old breed this horn frequently projected nearly horizontally on either side; but as the cattle were improved, the horn assumed other directions. The cut of the Irish Cattle, p. 113 of the present volume of the Cabinet, gives no unfaithful representation of their general appearance and form, and the breed became distinguished by the name of "The Long-horns;" but whence they were derived was, and still is, a disputed point, although they seem to have first appeared in Craven, and gradually to have spread along the western coast, until they occupied, almost exclusively, the midland counties. There are two distinct breeds of these cattle; the smaller, inhabiting the mountains, hardy, useful, valued by the cottager and small farmer on account of the ease with which they are kept, the superior quantity and excellent quality of their milk, and the aptitude with which they fatten when removed to better pasture: the larger, occupying a more level and richer pasture, are very fair milkers, although, in proportion to their size, not equal to the others; but they possess a tendency to fatten, and acquire extraordinary bulk, scarcely inferior to that of the Short-horns of the present day.

The foregoing cut exhibits the portrait of a Craven Bull of the present day, but supposed to bear about him many of the characteristics of the old breed: he was drawn as he stood in Smithfield market. Here were evident materials for a skilful breeder to work upon—a connexion of excellencies and defects by no means inseparable; that which was good might easily be rendered more valuable, and the alloy be thrown off. A blacksmith and farrier of Linton, in Derbyshire, whose name was Welby, has the honour of undertaking the task: he prided himself much in them, and they deserved the care which he took in improving them. After him appeared the master-improver of the Long-horns, Bakewell, to whom contemporaries and posterity have adjudged the merit of creating, as it were, a new breed of cattle, unrivalled for roundness of form, smallness of bone, and aptitude to acquire external fat, although the dairyman and small farmer still clung to the old breed, as most useful for their purpose.

For the Farmers' Cabinet.

Maize or Corn-Sugar.

Mr. Editor,—In justice to myself, I hope I may be permitted to draw the attention of the readers of the Cabinet to my late articles on the manufacture of corn-sugar, pp. 142, 218, and Mr. Webb's reply, p. 195, of the present volume. I there stated, that although much merit was due to Mr. Webb for his prosecution of that very interesting subject to a conviction of the feasibility with which the end might be accomplished, yet, there was no *discovery*, properly speaking; no new adaptation of any known principle of operation developed, either chemically or mechanically, in what has been termed the new process, for which it was said at the time, Mr. Webb had secured a patent. And although Mr. Webb has satisfied every one of the fact that he never had, or even intended to apply for a patent for his process, still, I confess I was not prepared to grant him all the credit which some of his friends demanded for him, seeing, as I said, that the thing had long before been done, and on the principle which he had adopted. This feeling was considered by some, and I fear by Mr. Webb himself, uncharitable: how far the charge is just, I need only point to Mr. Webb's lecture on the subject, delivered at Washington, and published by the "National Agricultural Society," and ask, if in any part of it there is the least pretension to discovery of any sort, or even of improvement in any of the processes, whether of growing the corn or extracting and concentrating its juices; nay, I would add, whether the processes he details, and those which he cites from a "manual on the subject of *cane-sugar* prepared some years since," are not known and admitted to be very defective, when compared with late improvements—which might well be termed *discoveries*—in the art of sugar-making; coming properly under the head of Refining—"Defecation being," as the author of the manual expresses it, "the great problem of sugar-making;" but of which I confess I do not see anything, in the processes that Mr. Webb describes in his lecture or essay.

His descriptions relating to the growing of the crop, with the machinery in common use for crushing and pressing the stalks, are plain enough; so also is the account of the common mode of defecation, filtration, and concentration, by means of the *bascule*—better known by the term *tilt-pan*—which is in very general use where evaporation by steam is not practised; but there is nothing *new* in all this; nay, the whole of these processes have been of late so much improved, in every sense of the word, that what is here detailed, may very properly be termed *antiquated*, without the least disparagement to Mr. Webb or any one concerned in the matter—witness, in particular, the want of all judgment in apportioning the necessary quantity of lime in the process of defecation, where Mr. Webb says, "I have never failed in making sugar from employing too much or too little lime; a *certain* portion of this substance is undoubtedly necessary, and *more* or *less* than this will be *injurious*, but no precise directions can be given about it;" the *latitude* which he admits being a difference of exactly 100 per cent.: as also the loose mode of judging the proper point of concentration, to insure speedy and perfect granulation; by which he is brought to the confession, that why so great a length of time is required for the drainage of the sugar from the time of boiling—in no case less than three weeks—he has not yet been able to discover. From Mr. Webb's own showing, then, "the precise point of concentration had not been either understood or practised," any more than the principle and practice of defecation. But in all this I by no means wish to detract "an iota" from Mr. Webb's fame; I most willingly accord to him the portion of merit which is so justly his due; nor should I again have taken up the subject had not his lecture at Washington given ample proof of the want of originality in all that has been claimed as a new mode of fabricating sugar from the corn-stalk. And to show this, I enclose for publication in the Cabinet, extracts from the essay, as published by the "National Agricultural Society;" drawing particular attention to the appended "Extracts from Annales de la Société Polytechnic Pratique, No. 22, for October, 1839; translated at the patent office, Washington;" in which is stated the fact, that the precise operation of extracting the ear from the corn for the purpose of furnishing a greater quantity of sugar, had already been practised in France, although I had been led to believe that *this* operation was claimed by Mr. Webb as original; who, indeed, expressed a degree of mortification on being told that "no doubt he knew such a mode had long been practised on the Palm for the same purpose;" for he says, "I certainly did not know that this plan had been applied to the cocoa or any other *tree;* and notwithstanding the quotation, I am still very far from being convinced of the fact." Now, are we to understand that Mr. Webb did, or did *not* know that the plan had already been applied to the corn-stalk itself, and exactly in the way that he directs? But this question I by no means ask invidiously.

J. M. C.

Eastern Shore, Maryland,
April 14, 1842.

Extracts from Mr. Webb's Essay.

"It is a part of the system of cane planting in Louisiana, to raise as full a stand of cane upon the ground as possible; experience having proved that the most sugar is obtained from land in this way." As far as my experience has gone, the same thing is true of corn. This point must therefore be attended to, and the deficiencies, if any occur, made up by timely replanting.

The next operation is taking off the ears. Many stalks will not produce any, but wherever they appear, they must be removed. It is not best to undertake this work too early; as when the ears first appear, they are tender, and cannot be taken off without breaking, which increases the trouble. Any time before the formation of grain upon them, will be soon enough. Nothing farther is necessary to be done until the crop is ready to cut for grinding. In our latitude, the cutting may commence, with the earlier varieties, about the middle of August. The later kinds will be ripe in September, and continue in season until cut off by frost. The stalks should be topped and bladed while standing in the field. They are then cut, tied in bundles, and taken to the mill. The top blades, when properly cured, make excellent fodder, rather better, it is believed, than any hitherto used; and the residuum, after passing the rollers, may easily be dried and used in the same way; another advantage over the cane, which, after the juice is expressed, is usually burned. The mills should be made on the same general principle employed in constructing those intended for grinding cane. An important difference, however, will be found, both in the original cost and in the expense of working them. Judging from the comparative hardness of cane and corn-stalk, it is believed that one-fourth part of the strength necessary in the construction of a cane-mill, will be amply sufficient for corn; and less than one-fourth part of the power will move it with the same velocity. It may be made with three upright wooden rollers, from twenty to forty inches in length, turned so as to run true, and fitted into a strong frame-work, consisting of two horizontal pieces sustained by uprights. These pieces are mortised to admit wedges on each side the pivots of the two outside rollers, by which their distances from the middle one may be regulated. The power is applied to the middle roller, and the others are moved from it by means of cogs. In grinding, the stalks pass through on the right side of the middle cylinder, and come in contact with a piece of frame-work called the dumb returner, which directs them backwards, so that they pass through the rollers again on the opposite side of the middle one. The modern improved machine is made entirely of iron; three horizontal rollers arranged in a triangular form, one above and two below, the cane or stalk passes directly through, receiving two pressures before it escapes. The lower cylinders are contained in a small cistern which receives the juice. The latter machine is the most complete, the former the least expensive. These mills may be moved by cattle, but for large operations, steam or water power is preferable. When the vertical cylinders are turned by cattle, the axis of the middle one has long levers fixed across it, extending from ten to fifteen feet from the centre. To render the arms firm, the axis of this roller is carried up to a considerable height, and oblique braces of wood by which the oxen or horses draw, are extended from the top of the vertical axis, to the extremities of each of the arms. When horizontal cylinders are propelled by animal power, the upper roller is turned by cogs at one end, which are caught by cogs on a vertical shaft. It is said that in the West Indies, the purest cane-juice will ferment in twenty minutes after it enters the receiver; corn juice has been kept for one hour before boiling, without any apparent injury resulting; but so much delay is not desirable, as it may be attended with bad effects. The process which has been employed in the manufacture of maize sugar, is as follows:—The juice, after coming from the mill, stood for a short time to deposit some of its coarser impurities; it was then poured off, and passed through a flannel strainer, in order to get rid of such matters as could be thus separated; lime water, called milk of lime, was then added in the proportion of one or two table spoonsful to the gallon. It is said by sugar manufacturers, that knowledge on this point can only be acquired by experience; but I have never failed in making sugar from employing too much or too little of the lime. A certain portion of this substance, however, is undoubtedly necessary, and more or less than this will be injurious; but no precise directions can be given about it. The juice was then placed over the fire, and brought nearly to the boiling point, when it was carefully skimmed, taking care to complete this operation before ebullition commenced. It was then boiled down rapidly, removing the scum as it rose. The juice was examined from time to time, and if there was an appearance of feculent particles which would not rise to the surface, it was again passed through a flannel strainer. In judging when the syrup was sufficiently boiled, a portion was taken between the thumb and finger, and if, when moderately cool, a thread half an inch long could be drawn, it was considered to be done, and was poured into broad shallow vessels to crystallize. In some cases crystallization commenced in twelve hours; in others, not till

after several days; and in no case was this process so far completed as to allow the sugar to be drained in less than three weeks from the time of boiling. The reason why so great a length of time was required, I have not yet been able to discover. There is no doubt but that an improved process of manufacture will cause it to granulate as quickly as any other.

For evaporation, flat-bottomed pans are recommended, made either of copper or boiler sheet-iron. If the situation will admit, they should be so arranged, that the juice will run from one to the other, and thus save the trouble of lading. The lower pan should be furnished with a spout at the bottom, (not less than four inches in diameter,) by which its contents can be drawn off. The shape of these vessels should be oblong, their sides and ends sloping at angles somewhat different in each. In the upper pan where the juice first enters, the sides form an angle with a line perpendicular from the bottom of about 30°. In the lowest pan, this angle should not be less than 45°. Skimmers with rectangular, instead of circular edges, must be employed for removing scum. The syrup is brought, in the latter vessel, to about 25° by the saccharometer, when it is withdrawn into a large wooden reservoir, whose depth should be at least three feet. To finish the evaporation the Bascule pan is recommended; this is extensively used in Louisiana, and has over the kettles the advantages of completing the operation with greater rapidity and safety — of enabling the operator to carry the boiling completely to the point of granulation, and to decant the whole charge instantaneously into the cooler; also of giving to the syrup time for depositing a heavy sediment of impurities, not otherwise separable from it, but which, on the old plan, goes forward to impair the granulation, and to discolour the sugar; and, finally, of allowing the proprietor to superintend in person the concluding and most delicate part of the manufacture: one Bascule pan being sufficient to evaporate to the granulating point, in twelve or fifteen hours, all the juice which two sets of kettles can evaporate in twenty-four hours, to the point of concentration mentioned above. This pan is of a circular form, made of copper, fourteen inches deep, five and a half feet in diameter, and sixteen inches deep near the lip, or in these proportions. It is mounted over a separate furnace, is moveable upon its axis, and is furnished with a large lip, over which the whole contents may be poured into a receiver. On the side of the vessel opposite the lip is a rope or chain attached to a pulley over head, by means of which it is quickly emptied. "In using this pan, the juice is evaporated in the kettles as before, but is struck, between 25° and 28° of the hydrometer of Baume, into a large cistern capable of containing at least four or five hogsheads, where it cools, and deposits a thick sediment. From this reservoir, it is pumped up, from time to time, into a smaller one situated just above the Bascule pan. The operation with this apparatus is as follows: — The gate attached to the reservoir of syrup is raised, and the bottom of the pan covered to the depth of four inches. A brisk fire being kindled under it, boiling soon commences; a slight scum rises, which flows down into the lip, whence it is removed by means of a hand skimmer. The striking point is ascertained as in the kettles, except that a thermometer is often made use of to learn its approach. When struck, the thermometer stands from 236° to 238°.

"To assuage excessive ebullition, it is customary to throw in a small piece of lard or of butter just previous to the completion of the cooking; and at the moment of decanting the charge, notice is given to the fireman, who closes the ash-pit door to prevent the flames from rushing up into the boiling apartment, to the inconvenience of the operator, who is stationed upon the rim of the furnace by the side of the pan. Immediately on its being discharged, it is suffered to fall back to its place, and the gate of the reservoir is lifted as soon as possible, in order to cover the bottom of the pan before it becomes too hot from the action of the flame. The time required to perform the operation varies from twenty to thirty minutes, and the result is a highly improved sugar, with the estimated gain of one hogshead in fourteen over the old method."

Enough has been said to enable any one so disposed to manufacture sugar from maize, either on a large or a small scale. As to the profits of the business, I shall make no positive assertions; experience on the subject is yet too limited to warrant them; and as all the facts in relation to it are now before the public, every one interested can draw his own conclusions. It is said by those acquainted with the cultivation of the cane, that the business cannot be carried on profitably on less than one hundred acres in crop, and that attempts on a small scale will be certain to fail with a great loss of time and labour. How far this may be applicable to corn, remains to be seen. Some comparison between the cultivation of cane and that of corn, may perhaps be interesting.

The cane-lands in Louisiana are redeemed to agriculture, by strong embankments along the river, and by numerous ditches, which extend back into the swamp to a considerable distance beyond the line of cultivation. The ground is still further divided by smaller ditches into lots of from one to two acres in ex-

tent. It is extremely rich and productive; but the expense of draining, and keeping up the embankments, must be very considerable; this forms the first difference to be noted in the culture of the two plants under consideration. The best season for planting cane in Louisiana, is in the fall, which is also the time of harvest, when labour is most valuable, and the greatest exertions are required to secure the crop before it is destroyed by frost. But the most striking difference will be found in the cost of seed, and in the labour of planting. The cane is propagated by layers; these are partly furnished from the tops of the plant, when cut for grinding, but are principally rattoons. Of the latter, it requires the produce of one acre to plant three. The grain from one acre of corn will be sufficient for planting forty acres. Therefore the difference in expense for seed, will be as one to thirteen. In planting cane, furrows are made with the plough from two and a half to three feet apart; in these the layers are placed in a double row, and the earth drawn over them with hoes to the depth of three or four inches. In the spring, before the plants are up, this covering is partly scraped off, so as to leave them buried from one to two inches.

From this account, it is evident that no more manual labour will be required to drill fifty acres in corn, than to plant one acre in cane. The labour of cultivating the latter plant during its growth, is also greater; but this may be balanced by the extra work required to take off the embryo ears from the corn. When cultivated in the mode recommended, the stalk of corn is soft, remarkably heavy, and full of juice from bottom to top. The amount of power required for grinding them, must be much less than is necessary for cane—or, what is the same thing, an equal power will do it with greater rapidity. The average yield of cane in Louisiana, is one thousand pounds of sugar, and forty-five gallons of molasses, per acre. From the above comparative statement, it would appear that one half this amount of crop from corn would be equally, if not more profitable.

I will only add in conclusion, that whether or not sugar from the corn-stalk may soon become an article of profitable export, its manufacture in the simplest form will enable every family to supply themselves with this article for common use, now become so much a necessary of life, and thus save a considerable bill of expense, yearly paid for foreign sugars.

W. Webb.

Extract from Annales de la Société Polytechnique Pratique, No. 22, for October, 1839. Translated at the patent office, Washington.

Sugar of Corn.—There is no plant of greater general interest or utility than Indian corn. It can serve, under a great variety of different forms, for the nourishment of man and the domestic animals, and above all, the application of industrious science.

In reference to its saccharine qualities, maize has not been sufficiently appreciated. Travellers report, that under the tropics the stalk of this plant is so very saccharine, that the Indians suck it as in other places they do the sugar-cane.

M. Pallas, who has made a great many researches on this application of maize, has arrived at a remarkable result; he has found by many experiments, both in France, and more recently in Africa, that this vegetable, by a simple modification applied to its culture, is able to furnish a much more considerable quantity of sugar, than by the ordinary method.

This method consists in detaching from the plant, immediately after the fecundation of the ovaries (after the plant has tasselled) the young ear, and to leave it to develop itself thus deprived of its fruit. Arrived at maturity, the stalk of the Indian-corn contains crystallizable sugar in quantity very often double that obtained when the plant is left to mature with the grain. In fact, by the ordinary mode of culture, the grain is nourished at the expense of the sugar in the stalk, as it absorbs a great quantity of this immediate principle, which, by the process of nutrition, is converted into starch. On the other hand, if the young ears are immediately destroyed, the sugar intended to nourish them remains in them where it accumulates, and the maize plant is thus converted into a true sugar-cane, while the fibrous part can be manufactured into paper.

The quantity of sugar is so very great in the stalk of the maize deprived of the ear, that the pith of this vegetable retains a sensible flavour of sugar even after it has been dried, as is easily proved by examining the specimens deposited by M. Pallas in the Bureau of the Academy of Sciences. These results are so important as to merit experiments on a grander scale, which may obtain thus for France a source of new industry in the manufacture of sugar.

Mildew on Gooseberries.—"To keep off mildew, train your bushes so as to admit a free circulation of air through them; manure about the roots, and forget not to sprinkle them freely with soap-suds before blossoming. This is known by several years' experience."

A thorough-shaped beast will always come well to the scale, whereas an ill-formed one will seldom reach the weight at which he is estimated.

To the Editor of the Farmers' Cabinet.

Practical Farming.

Under a conviction that much of the benefit that might otherwise have been derived by individuals from statements published in the Cabinet and other very valuable publications devoted to agriculture, has been lessened, by holding up farming as the most profitable business a man could embark in — more especially when something new is brought forward — I am induced to offer some views thereon; as I have known instances in which individuals have suffered loss and disappointment therefrom. This must eventually prove an injury to the good cause which it was intended to promote. One person plants a few rods of land with ruta-baga, another with beets, another with lucerne, &c., and if *very successful*, publishes the result; and the inference is drawn, that if so many rods will produce so much an acre, ten acres will produce in the same proportion; and so with the value annexed; which goes to show, what a large sum might be realized from a farm of one hundred acres or more! Hence, many persons, who are prone to unsettlement in business (and there are quite too many of that description amongst us), determine to try their fortune at farming; but soon become convinced that, however A may have succeeded under favourable circumstances with a few rods of ruta-baga, or B with the like quantity of beets, with them upon a large scale it has sometimes proved a failure. This, I think, generally proves to be the case; but if, perchance, successful in *quantity*, the price will not defray the expense their inexperience has subjected them to. Some, perhaps, may suppose the writer to be one of those who have been thus disappointed; but such is not the fact: he has followed the occupation of a farmer for many years, and expects to continue in that calling so long as it shall please an allwise Providence to favour him with the ability to do so; believing it to be the most useful business that can be followed, although not the most lucrative; yet, when conducted on proper principles, it may be made sufficiently so for all the necessary enjoyments of life. But in order to make it so, farmers must start fair, be willing to live in a plain, frugal (I do not mean parsimonious) manner, which is the alone safe way for all. If he must have a large and costly-furnished house, fine carriage and many dependants — making what is termed a splendid establishment to start upon — he may rest assured, that unless he has other resources than his farm, although it may be a good one and paid for, he will find himself dependent ere long.

I would by no means discourage any one from publishing the result of his experience and observation; nay, I think it almost a duty which we owe each other; and that, too, after his own manner, seeing there is such a laudable desire for information abroad, and so many channels through which it can be made public. And when comments are made upon it, let it be done in a proper spirit, having reference to the *matter*, not the *manner* — considering, that many of us who are pretty well advanced in life, had but very limited opportunities to acquire learning, as compared to later and present times; yet our *experience* and *observation* may have taught us some things, which it would not harm those of more learning to know. In the last Cabinet but one, there was an article on the comparative merits of ruta-baga, corn, hay and oats, as feed for horses, in which the saving by the use of ruta-baga and straw, is made to appear very great. I have never tried that plan, but if horses will keep well for a length of time, and perform daily hard work on ruta-baga, it is of vast importance that it should be generally known. I am well assured, that mine would not so keep and perform the work they do, "on the value of a bushel of corn or straw and meal for a week." His estimate of hay is higher than I find mine to eat, although kept up (when not in service) all the year, and allowed as much good hay as they will eat. If, on further experiments by the writer of the article and others, it should be fully established, it will prove an incalculable benefit to agriculturists, and eventually, the public at large: for if by it half an acre will sustain a horse as well as six acres by the present generally adopted practice, the saving throughout the state would be immense; sufficient, I should suppose, to pay all our taxes, if not, eventually, the debt of the state.

In the last Cabinet, which is, I think, the most valuable one I have read for a considerable time, there is much said, and profitably so, I think, on lime, its qualities and properties. Can any of the correspondents of the Cabinet inform what proportion of magnesia there is in the lime known as Sandy-Run lime, in the neighbourhood of Fitzwater-town, Upper Dublin, Montgomery County; and which of the quarries in that neighbourhood contains the least of that article? If they can, I think they would confer an obligation on many farmers who use much of said lime on their land; for one, I should esteem it a great favour. Is there no simple method by which farmers might test its properties for themselves? As it regards the quantity to be used per acre, I think it must ever be left to the judgment and experience of the farmer, he being acquainted with the qualities of the lime and of his soil. On part of my farm, I think twenty-five bushels of the lime aforementioned would be quite as much as it

would be prudent to apply at one dressing; other parts would bear forty, fifty, or sixty to advantage. By not attending to this, many people have become discouraged in the use of lime, thinking it did more harm than good. In the last Cabinet, AGRICOLA gives us his views on a rotation of crops, which I approve, as being well calculated to improve the land and crops of grain; but on my farm and those of my neighbourhood, I have doubts of its success with grass, which we think an important crop. I am aware that to plough down a crop of clover, or even clover-stubble, would be a good fallow for wheat; but as far as my observation goes, the crops of grass—timothy and clover, especially the former—will be much inferior to that of the customary mode, that of oats or potatoes after corn, then ploughed twice or thrice, so as to have it quite clean before sowing; the cleaner the ground, the better and more enduring the succeeding crops of grass will prove. I have long believed that the practice, which has so long been in use, of rotting our manure and ploughing it under in the fall for wheat, was attended with much loss. I have invariably had the best grass (but not so of wheat) where I have top-dressed the wheat, if the fallow was well cleaned before sowing. After all, the advantages or disadvantages of any system of farming, will much depend on the quality of the land, and the purpose to which its owner wishes to apply it; some lands and locations being more favourable for grain, some for the dairy, others for grazing, &c.

A MONTGOMERY CO. FARMER.

P. S. How fares the sugar-beet? Is its use progressing or otherwise, and what would be a proper quantity to give a milch cow daily? I have not had much experience, but so far as I have, it appears that if they had more than a given quantity, its tendency is to create such a looseness in the bowels, as counteracts much of the benefit they would otherwise receive from their use. Just a sufficient quantity with their dry food, to keep the bowels in a proper state, I think is useful, both to the dairy and manure-yard. I should be pleased to hear from those of much more experience herein than I have had.

Love of the Country and its Occupations.

To the traveller, what can be more interesting than to observe the industrious and enterprising farmer building neat, comfortable houses, and preparing his lands to bring forth an abundant crop?—or, on the other hand, what more discouraging and disagreeable than to see everything on the decline—houses rotting down for want of care, fences levelled, and the fields grown up with briars and bushes? We easily form a correct idea of a man's pride, judgment or industry, by observing the construction and order of his farm; for we find at every step something that excites our admiration in the pursuit of the delightful employment, or we meet with something so disagreeable, that, for a moment we feel inclined to abandon altogether a business that seems so ill calculated to enlist our energies either of body or mind. That farm in the distance! it presents an appearance of total ruin, and we might think it deserted, were it not for the smoke arising from its wooden chimney, which reaches but half way to the top of the house—no—*cabin*, not house! It is covered with boards, carelessly put on, and held to their places by weight-poles. We must climb the fence to get into the yard, and stumble over a pile of boards and rails, which lie rotting, before we can reach the house—stoop down as we enter the door, or our hat is taken off by the top of it; then stumble over the open, loose floor, and make our way to the fire-place, which is built of clay, and has no hearth, for it has all been swept away; then look around and see a hundred cracks, and here sit, on a wet and cold day, and shiver over a hot fire! In putting up our horse, we must navigate first around this pen and then that, before we reach the lot, and pull down the bars, when out jumps the farmer's mule; we then steer through the mud to the stable, but the door is so low that we can hardly squeeze the poor animal through—not strange either, for the mud inside is no inducement for them to seek shelter there. For the feed, we must pass clear beyond the stable, encountering starving cows who attack us for the fodder, and squalling land-pikes for the corn!—and then, to fasten up the horse, we have to lay hold of muddy rails that have been trodden into the dirt for a week, and fix them into holes in the posts, which are then to perform the office of a door by keeping *in* the horse, but not by keeping *out* the wind and rain. Here are the ploughs and harrows exposed to the weather, and the wagon without a shelter, and forming the only cover for the half-starved and drowning hogs! Such being the confusion of the whole place, we should look in vain were we to endeavour to discover its comforts.

Now, are such things as these calculated to allure us to the "tranquil shades of the country, where we may spend our days in heavenly musings?"—or rather, do not these scenes lead us to form, even while looking upon them, a distaste for an occupation which, if correctly followed, affords sweeter enjoyments than any other? By good management, every man can wield a mighty influence, by making valuable and convenient improvements upon his farm: he thus makes his

land more productive, he saves labour and time, and excites his neighbour to order and industry; cultivates his own taste; sets a noble example to his children; secures to his family a thousand blessings; and prepares himself to enjoy the sweetest pleasures in this life, and a glorious reward in that which is to come.—*Agriculturist.*

For the Farmers' Cabinet.

Culture of Mustard.

Mr. Editor, — In addition to several excellent papers in former numbers of the Cabinet, recommending the cultivation of articles for which we are at present mainly indebted to foreign countries, I would advocate in this the growth of Mustard, a crop requiring neither skill in the management or additional outlay of capital, either for labour or machinery; a small amount of practical experience being all-sufficient to the supply of the article to any extent, and at a fair remuneration for *labour*, which, by-the-bye, would be found of the lightest and most pleasant kind, quite within the power of lads to perform, from the time of sowing the seed to the harvesting of the crop, both included. And I have a strong presentiment, that the seed raised amongst us would prove of very superior quality, our "light and heat" being friendly to the development of the essential oil or *empyreuma*, which constitutes the value of this peculiar crop, as also of others, which might be named on some future occasion. I find an interesting article on this subject in the Cultivator, for which I ask space in the pages of the Cabinet, and am

A Subscriber.

"It is not generally known how large a quantity of the seed of the mustard-plant is annually consumed in this country; it is imported from Holland and the more southern parts of Europe, and sold in our Atlantic markets at from three to four dollars a bushel. It is also raised in England, and there manufactured for the table, in which state it is exported to this country in large quantities as 'real Durham mustard!' I believe that those who have soils suited to the growth of this crop, will find it more profitable than almost any other they can raise; it requires a rich, clean, moist soil, the seeds to be sown about the time of other spring grains, four quarts being sufficient for an acre, sown broadcast; it is, however, often drilled and handhoed. It usually ripens unequally, and should be cut while rather green, to prevent waste by shelling; stacking upon canvas, and the top well secured from rain; and here it must remain until properly cured. By this treatment, the unripe seeds will be nourished by the stalk until they become plump and sound. If threshed abroad in the fields, it must be done on canvass, to prevent waste; and this mode is to be preferred to removing it to the barn, as it is very apt to shell while removing to the threshing floor. Particular pains must be taken in the process of cleaning, which could, however, be extremely well performed by the improved winnowing machine in use amongst us. The ordinary yield will be from ten to twenty bushels of seed per acre. The firm of French & Davis, mustard manufacturers, Albany, offer to contract with farmers for what they can raise, at $3 50 per bushel for brown seed; the yellow seed is less valuable for manufacturing purposes.

Cultivation of Flowers.

We are happy to perceive that more attention is being paid to the cultivation of flowers, and that the views of our ancestors, so singularly and strangely utilitarian in this respect, are rapidly giving way to sentiments more liberal and refined. The generous and moralizing influence which it is calculated to operate upon the mind and its affections, cannot, in our opinion, be too highly appreciated. Flowers are alike the preaching emblems of transient beauty and taintless innocence, and breathe in the chaste language of their eloquent loveliness, a moral that is forcibly felt and acknowledged even by the most depraved.

What object in nature is more touching to the contemplative mind, than a withered flower? What an inimitable picture does it present of the brevity and short-lived glory of human life!

The mind that can pass from the contemplation of such an object with no sense of an uplifted spirit—of passions chastened and affections purified, must be cold indeed.

In the language of the German bard —

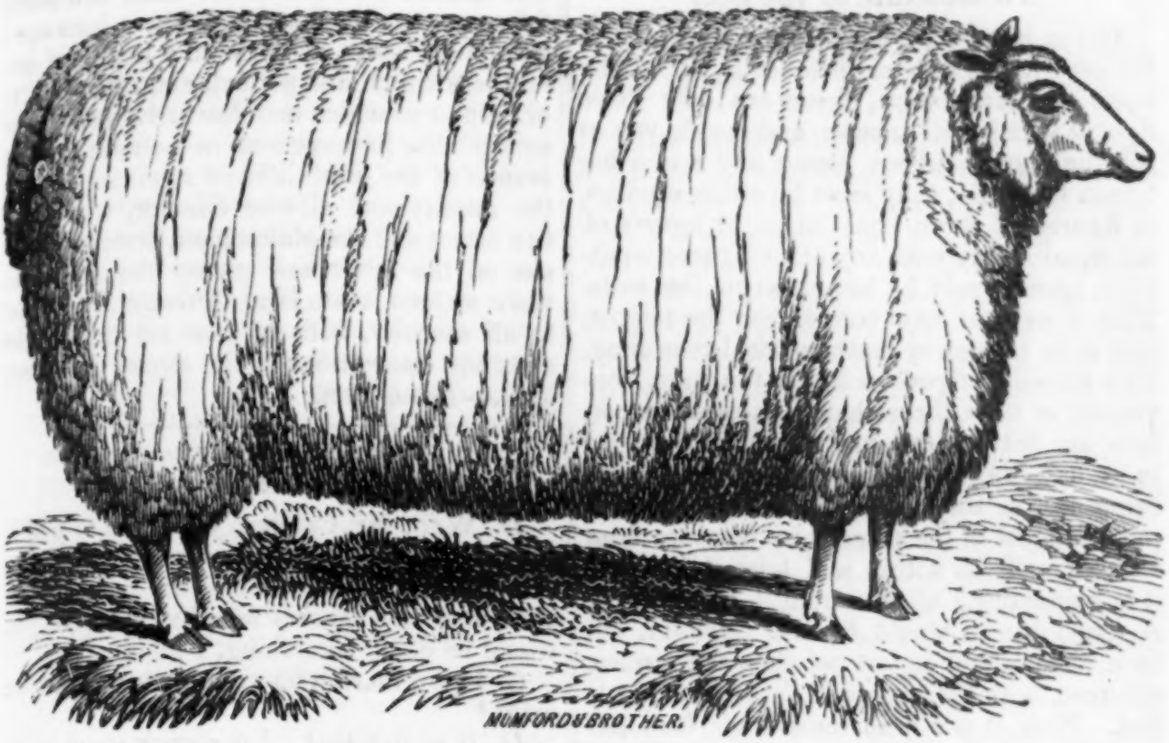
A flower do but place near thy window glass,
And through it no image of evil shall pass.
Abroad must thou go? on thy white bosom wear
A nosegay, and doubt not an angel is there;
Forget not to water at break of the day
The lilies, and thou shalt be fairer than they;
Place a rose near thy bed nightly sentry to keep,
And angels shall rock thee on roses to sleep.

We have no sympathy with those who would desecrate and pare down the loveliness of earth to the grade of mere utility; who can discover no beauty in the opening bud and blushing flower, and whose exertions are limited on all occasions, by a parsimonious idolatry, and a worse than idiotic privation of sensibility to the

"Maddening love of gold."

[*Me. Cult.*

A Young cow will often be fat on the back, but seldom well tallowed within; an old cow seldom handles so well, but carries most of her fat within.



CLAYTON.

Bred and fed by Major Philip Reybold, Delaware.

Live weight, 227 lbs.—dead weight, the four quarters, 130.

The two-years old wether pourtrayed above, was the most beautiful of those which were exhibited and slaughtered on the 3d of March, by Schneck & Brothers; and, it may perhaps be added, the most perfect of his class that was ever exhibited in the United States by any breeder. The size of the head and the bones of the legs was remarkably small—to appearance almost unnaturally so, but by no means larger than are made to appear in our engraving, the shape of the former being of that snake-like figure as there exhibited. A portion of this splendid animal is still at the office of the Cabinet, the thickness of the top of the rib and the plate, astonishing every one.

The new Leicester sheep, although smaller in bulk of body than the long-wooled races which they supplanted—namely, the old Lincoln, Teeswater, and Cotswold—are yet of the larger class of sheep with respect to weight; their limbs being shorter and their bodies more round, compact and deep than those, they are of greater weight in proportion to their apparent bulk; at the same time, their actual size is various, depending much on the wish of the breeder to possess larger or smaller animals, and on the fertility, natural or acquired, of the districts in which they are reared. In general, it may be said that the wethers weigh from 25 lb. to 35 lbs. per quarter when fatted in their second year, the wool being of medium length, having a staple of six or eight inches. But it is not in the size or weight of body, nor in the productiveness or quality of wool, that the real value of the new Leicester breed consists; its superiority is to be found in its more perfect form and aptitude to fatten at an early age, in which respects it surpasses all the other varieties of long-wooled sheep which have been cultivated in England, or naturalized in any part of Europe; for they can readily be fatted for human food at the age of 15 months, or when they are called *shearlings;* and in no case do they need to exceed the age of two years. The hind and fore-quarters more nearly approximate in this, than in any other breed; the fatty tissue being more equally spread over the external muscles, tending to accumulate less about the kidneys and internal parts; and hence the breed has never been so great a favourite with the butcher as some others; but the mutton is not surpassed by any of the other long-wooled breeds whatever.

Architecture of the Bee.

If you have a certain space, as a room, to fill up with closets or little cells, all of the same size and shape, there are only three figures which will answer, and enable you to fill the room without losing any space between the cells; they must be either squares, or figures of three equal sides, or figures of six equal sides: with any other figures whatever, space would be lost between the cells. This is evident upon considering the matter, and it is proved by mathematical reasoning. The six-sided figure is by far the most convenient of those three shapes, because its corners are flatter; and any round body placed in it has, therefore, more space, less room being lost in the corners: this figure, too, is the strongest of the three; any pressure from without or from within will hurt it least, as it has something of the strength of the arch. A round figure would be still stronger, but then room would be lost between the circles, whereas, with the six-sided figure nothing is lost. Now, it is a most remarkable fact, that *bees* build their cells exactly in this shape, and thereby save both room and materials, beyond what they could save if they built in any other shape whatever! They build in the very best possible shape for their purpose, which is, to save all the room and all the wax they can.

So far as to the shape of the walls of each cell; but the roof and floor, or top and bottom, are built upon equally true principles. It is proved by mathematicians, that to give the greatest strength and save the most room, the roof and floor must be made of three square planes meeting in a point; and they have further proved, by a demonstration belonging to the highest parts of algebra, that there is one particular angle or inclination of those planes to each other where they meet, which makes a greater saving of materials and of work than any other inclination whatever could possibly do. Now, the bees actually make the tops and bottoms of their cells of three planes meeting in a point; and the inclinations or angles at which they meet are precisely those found out by the mathematician to be the best possible for saving wax and work.* Who would dream of the bee knowing the highest branch of the mathematics—the fruit of Newton's most wonderful discovery!—a result, too, of which he was himself ignorant, of one of his most celebrated followers having found it out in a later age! This little insect works with a truth and correctness which are perfect, and according to principles at which man has arrived only after ages of slow improvement in the most difficult branch of the most difficult science. But to the mighty and allwise Creator, who made the insect and the philosopher, bestowing reason on the latter, and giving the former to work without it—to Him all truths are known to all eternity, with an intuition that mocks even the conceptions of the sagest of human kind.—*Brougham.*

* Koenig, pupil of Bernonilli and Maclaurin, proved by very refined investigations, carried on with the aid of the fluxional calculus, that the obtuse angle must be 109° 28′, and the acute 70° 32′, to save the most wax and work possible. Maraldi found, by actual measurement, that the angles are *about* 110° and 70°. These angles never vary in any place; and it is scarcely less singular, that the breadths of all bees' cells are everywhere precisely the same, the drone or male cells being 5-18ths, and the worker or female cells 13-60ths of an inch in breadth, and this in all countries and times.

For the Farmers' Cabinet.

Dialogue founded in Fact.

D. Well, Mr. Cabinet, you seem to find it easy to teach us how to increase the quantity of our crops, but that is of little use. If you could find us a market for what we have, you would be doing something, I guess.

C. Is it a market for your produce that you want?

D. It is, just that. I can grow much more than I do, if I could dispose of it.

C. Then I will procure you a ready market for all you have, and without difficulty, if the quality be good.

D. The quality of my articles is as good as my neighbours'.

C. Then go into the market and offer your corn, wheat, oats, potatoes, &c., 2 or 3 cents per bushel below the regular price.

D. I thank you! And what should I get by that?

C. A ready market—which you just now said you wanted.

D. Do you take me for a fool?

C. By no means; but it would appear that it is not simply a *market* that you want, after all; if it is, the reading of the Cabinet and other works on agriculture, will teach you the way to increase your crops, so that you shall afford the sacrifice, and come off a gainer by the transaction.

The best merchant in the city used to say, "I can always *command* a market, if in buying I consent to give a little more, and in selling I am willing to accept a little less than the market price. By these means I am often enabled to turn my capital, while others are waiting for a market; remembering always, and never losing sight of the *axiom*, it matters not what I *give* for an article—the only question is, what can I *sell it for?*"

Ed.

The ancients were accustomed to prepare their straw for feeding stock by keeping it for a considerable time sprinkled with brine; it was then dried, tied in bundles, and given to oxen instead of hay.

For the Farmers' Cabinet.

Merino Sheep.

Mr. Editor, — I see, with pleasure, that the premium list of the Philadelphia Society for promoting Agriculture, for the present year, is made to embrace the Merino breed of sheep: this is well, for it is high time that the invaluable race should be again brought into notice; it is but for their friends to permit them to make their own way and not unite their efforts to kill them with kindness, and they will do all that was ever promised for them by those who were best acquainted with their real qualities, which were neither few nor small. I hope to see specimens of the pure breed at the Society's exhibition in the autumn, trusting that some few amongst their ten thousand former admirers have had the *constancy* to preserve them uncontaminated, were it only on the score of old attachments, for surely there must have been something real in their professions, which were so long, loud, and deep; but this hope I indulge, rather for the sake of instituting a trial between a cross with the Merino buck and the pure-bred Leicester or Bakewell ewe, of the most perfect form that can be selected, but not of very great size; for from such an union I have long been of the opinion that by far the most valuable wool is to be obtained, rather than from the cross with the Southdown; the staple of the wool between the former being more likely to give a combing wool of superior quality, which is much wanted amongst us; while the perfect form of the thorough-bred Bakewell ewe would not be likely to suffer much deterioration from the cross—taking for granted it will be admitted that the form of the Merino is by no means what might be desired by the admirers of symmetry and proportion. And this cross between the smaller male and the larger female, would be in accordance with the present enlightened theory, by which a race of improved animals may be obtained in a quarter part of the time that was once deemed necessary for the full developement of the experiment. It is much to be desired that some of our friends who are favourably situated, would take the subject *soberly* in hand, and see what could be done in the way of raising amongst ourselves a wool whose peculiar character would be of paramount importance to our domestic manufactures, in the event of a war with England.

The following is an extract from a treatise on this peculiar breed of sheep, the pure Merinos, by Mr. George Flower, of Albion, Illinois: it will be read with great interest at this time; and it may be hoped that some spirited friends of the cause will take measures to introduce specimens of his flock—the purest, in all probability, to be obtained at the present day—into this part of the country, in time for the Philadelphia Society's Exhibition in the autumn. J. T.

"The history of my own flock, kept in the southern part of Illinois, is favourable to the fine-wooled breed. They are from the merinoes of Spain, procured just before the French overran the country. Sir Charles Stewart, the English ambassador, purchased the royal flock. He shipped them, after a hurried drive, scarcely out of the reach of the pursuing enemy, some hundred miles. Six thousand only reached the shores of England; and, after a lapse of a year, two thousand sheep survived. These were purchased by my father. The first year's clip sold readily for $1 per pound in the grease, amounting to $10,000. This was then thought to be a very low price; wool once, during the war, about three years previous, having attained the enormous price of $5 per pound. Some additions were afterwards made from the Paular and Escurial flocks. When I emigrated to this country, in 1817, I brought with me six of the finest animals of the wool-bearing species ever brought to this country. This is the origin of my flock; they have been kept in the same district, and on the same farm where I now reside, ever since.

"No deterioration in wool has taken place; on the contrary, the wool fibre of them is somewhat finer. Eighty ewes, purchased of Mr. Beecher, of Lancaster, Ohio, from the Steubenville stock, has been the only addition to the pure-bred stock. The excellence of my wool is not only to be attributed to the fineness of the original stock, but to the continued selection of males with the finest wool. This flock has never been pampered, but has been kept hardily, in a way that any farmer may keep them. They go out on the prairie in April, and live upon the prairie-grass till October, or until it is too dry and harsh. They are then brought into the inclosed pastures; and, as winter advances, they are fed night and morning with hay and a few sheaf oats, or a small portion of shelled corn, say half a pint to each sheep. The flock is now completely acclimated, and may be said, after a twenty years' domicile, to be a native Illinois breed. Since I have owned them, there is a change for the better in the constitution and fatting qualities of these sheep. When they first came from Spain, the ewes were accounted bad mothers; and many were of tender constitutions. Now, from attention to these points in so long a course of breeding, the ewes are excellent mothers, and the fattest sheep is found to have the finest fleece. They are decidedly hardier than the common sheep. These facts show that the fine-wooled

sheep are adapted to the soil and climate of Illinois, and that they may be kept without any fear of degeneracy in wool or carcase.

"Of the large-framed, long-wooled sheep of England, we have less decided experience; yet some may be gathered (imperfect as it is) useful and important. I brought from England, with the merinoes, two Lincolnshire rams and four ewes; but all died but one ewe of the Bakewell breed. From this one ewe, with my fine-wooled bucks, a strain of sheep are yet observable, with deep chests, short legs, and broad backs, with great aptitude to fatten. From the same cross, upon common sheep, many of the progeny are defective in shape, though with a fleece of equal fineness."

To the Editor of the Farmers' Cabinet.

Compost.

Sir,—I have been much instructed, interested and amused, by the many excellent articles which have of late appeared in the pages of the Cabinet, both for and against the use of magnesian lime, and consider it only a duty to acknowledge that to you, Mr. Editor, are we indebted for all; for had you not introduced the short article, an extract from the "General Report of Scotland," at page 276 of the 5th volume, concerning Mr. Tenant's set of experiments on the magnesian limestone, in the neighbourhood of Doncaster, England, we should have been deprived of a series of the most valuable essays that have yet appeared in your very useful miscellany. And although the question has not been decided to the satisfaction of all, still I am convinced that every one feels himself more competent to form an opinion on the subject than he could have done had the question never been agitated; and this is the main object which the conductors of the agricultural periodical press ought always to keep in view, namely, to set people thinking—then they might be left to their own guidance with safety, for it is natural to a man, *when awake*, to be "aye making the experiment;" and as has been said, nothing but good can come of it, if our differences be confined to our opinions. Continue, therefore, to foster such differences, and depend upon the support and countenance of your subscribers, of whom I believe I may rank myself nearly, if not quite the first, acknowledging at the same time that I read your pages with increased interest.

But my present object is not to notice farther the well-written essays on this important subject which have enriched your pages, but to turn them to practical account. Now, the friends of magnesian lime advise that it shall first be rendered "mild," as it has very properly been termed, by slaking and exposure to the atmosphere, by which it becomes perfectly carbonized, and is no longer of that caustic nature to do injury to the crops in any stage of their growth. I therefore meet them on this ground, and propose, that the operation of slaking shall be performed by mixing it, in the state that it comes from the kiln, with fresh-dug muck or earth, peat, turf, &c., layer by layer, finishing the heap by a covering of the earth to keep in the heat that will be engendered; by which the very nature of the ingredients will be changed; the earth from a state of acidity and sterility, and the lime from a pernicious state of corrosiveness, to the nature of leached ashes; the alkali of the lime operating upon what were once termed the "fatty substances" of the muck, &c., producing a saponaceous compound, far superior to much that is brought at great expense from the cities, under the very appropriate name of *dirt*—which consists in a great measure of what is worthless, and injurious to the land on which it is applied. Now, I scarcely know a farm where a mine of this description might not be worked to much more profit than the best gold mine in Virginia, and all above ground, too: indeed, the time ought soon to arrive, when our chief attention shall be turned to the *formation of compost;* an art hitherto quite unknown in this country, but which is found indispensable in every country where taxation abounds; affording a fair criterion by which to form a just estimate of our own resources, and giving ample employment to all our "help" during winter, a time, of all others, most suitable for the preparation of large quantities of composted manures, for the purpose of top-dressing our mowing lands in the spring—by far the best mode of increasing the dung-hill the next winter. I have, then, the greatest confidence in recommending the above-mentioned mode of managing lime, whether it be magnesian or otherwise, but particularly if it be the former, as I feel satisfied that its union with fresh earth, muck, &c., would have a tendency to correct the evil so much complained of, from whatever cause that might arise. I had once an opportunity to test the value of the course recommended, and should be glad of the chance to repeat it. Near my house was a large bank of earth of very tenacious quality, covered by a thick turf, the growth of ages; I commenced ploughing very deep a portion of it, say 40 feet long and 12 feet wide, and upon this I spread a coat of lime, fresh from the kiln, four inches in thickness, throwing upon it thick spits of earth, taking up the whole substance of the soil; upon this again was spread another coat of lime, and then a covering of turfs; then more lime, and the heap was finished by a close covering of earth and sods carefully beaten down. In a short time the whole heap was

smoking like a volcano, and cracking open all around; requiring the constant addition of earth to keep in the heat, which was excessive, destroying all vegetation, with the larva of insects, bugs, grubs, &c., at a blow. At the end of a month the whole was turned up and well pulverized, which brought on another fermentation; and in about six weeks it was carried abroad on the meadows during a time of frost, a top-dressing as fine as ashes. The corrosive nature of the lime, corrected by "the salts of the earth," its acidity and sterility neutralized by the lime, the effects of the compound at the passing away of the frost were truly astonishing; *seen* in the immediate growth of the grass, and *felt* at the time of hay-harvest in a double crop of the most luxuriant growth of herbage, of a quality quite different in its nature; with white clover so thick as to induce persons to suppose that the seeds of that plant had been sown.

I have seen Dr. Dana's muck manual, and am much pleased with it. I have often been surprised to find persons bringing dung from the city at the cost of $70 per acre, and to hear them complain that their crops would not afford the expense of weeding; if these persons will just peruse the doctor's book, and go into the business of compost-making with good will, they may soon put their teams to other purposes and their men to *mucking*, and save time and money—two valuable ingredients; while an extra ploughing of their land will be found to save two extra weedings, besides improving their crops, and consequently, their own circumstances.

VIR.

April 25, 1842.

Natural Science.

THE mere gratification to be derived from learning some of the wonders with which we are surrounded, is surely a great satisfaction; for instance, to know that the same *thing*, or *motion*, or whatever it is which causes the sensation of heat, causes also fluidity, and expands bodies in all directions; that electricity, the light which is seen on the back of a cat, when slightly rubbed on a frosty evening, is the very same matter with the lightning of the clouds; that plants breathe like ourselves, but differently by day and by night; that the air which burns in our lamps enables a balloon to mount, and causes the globules of the dust of plants to rise, float through the air, and continue their race; in a word, is the immediate cause of vegetation. Nothing can at first view appear less like, or less likely to be caused by the same thing, than the process of burning and breathing—the rust of metals and burning—an acid and rust—the influence of a plant on the air it grows in by night, and of an animal on the same air at any time—nay, of a body burning in that air; and yet, all these are the same operation. It is an undeniable fact, that the very same thing which makes the fire burn, makes metals rust, forms acids, and enables plants and animals to breathe; that these operations, so unlike to common eyes, when examined by the light of science, are the same. And to know this must be a positive gratification, to find the same substances in various situations extremely unlike each other—to meet with fixed air as the produce of burning, of breathing, and of vegetation—to find that it is the choke-damp of mines, the bad air in the Grotto of Naples, the cause of death in neglected brewers' vats, and of the brisk and acid flavour of seltzer and other mineral waters and springs? Now nothing can be less like than the working of a vast steam-engine of the old construction and the crawling of a fly on the window, yet we find that these two operations are performed by the same means, the weight or pressure of the atmosphere—and that the sea-horse climbs the icebergs by no other power! Can any thing be more strange to contemplate, and is there in all the fairy tales that were ever fancied, any thing better calculated to arrest the attention and to occupy and gratify the mind, than this most unexpected resemblance between things so unlike to the eyes of ordinary beholders! And what more pleasing occupation than to see uncovered and bared before our eyes the very instruments and the process by which all-perfect Nature works! Then, when we raise our views to the structure of the heavens, and are gratified with tracing accurate but most unexpected resemblances, is it not in the highest degree interesting to find that the power which keeps this earth in its shape and in its path, wheeling upon its axis round the sun, extends over all the other worlds that compose the universe and gives to each its proper place and motion; that this same power keeps the moon in her path round our earth, and our earth in its path round the sun, and each planet in its course; that the same power causes the tides upon our globe and the peculiar form of the globe itself!—and that, after all, it is precisely the same power which makes a stone fall to the ground. To learn all these things and to reflect upon them, occupies the faculties, fills the mind, and produces certain, as well as the purest gratification.—*Brougham.*

THE great mischief is, that we farmers are in too great a hurry to get rich: we forget that the golden age has passed away, and that we are living under the hard influence of the iron ages.

For the Farmers' Cabinet.

Cheap Labour.

Mr. Editor,—The observation of "A Subscriber," page 286 of the last No. of the Cabinet, that very much of the labour of a farm that has heretofore been performed by men, might be quite as well executed by lads—suggesting that our almshouses and other charitable institutions might be made to furnish a considerable portion of such material, to the mutual advantage of the institution and its inmates—was fresh upon my mind, when, upon passing a very respectable country-looking young woman, evidently an emigrant, I was accosted with the inquiry, if I knew any *farmer* who wanted a female help? I found she had just arrived from one of the midland counties of England, and was very desirous of obtaining a situation on a farm, that she might once more feel *at home*. I supposed her wish was, to procure a situation as dairy-maid, but no—her desire was, to do once more what she had been accustomed to do all her life, to labour in the fields and to take her share of the customary work on the farm, not only at hay-time and harvest, but in spring-time and autumn, in weeding, stone-gathering, muck-spreading, turnip-hoeing, cattle-feeding, milking, and about half-a-dozen *et ceteras*, in all which she assured me she had ever been at the top of the profession; adding, she should never be quite right and happy until she could be doing the same thing again.

Now, I am curious to learn what are the objections which can be brought by our friends against this very rational request? Will it be said, such work is degrading to the female character? I would say, read Burns, and Bloomfield, and Thomson, and a dozen others, the best poets and writers both of modern and ancient times, and cull from them those exquisite scenes, which they have peopled with the most lovely objects of creation in the form of rustic female life! and where will you meet with such an assemblage of Loves and Graces? Or, is it feared that their strength is not equal to the task? The question could be solved in a single day to perfect satisfaction, without the necessity of considering them in the light of Amazons. Or is it, that the intermingling of the sexes in the lighter business of the farm would tend to blunt that sense of native modesty which is the glory of the female sex? This has not been found to be the case in countries where the system of out-door female labour has been pursued for ages. But there is one thing that it is adapted to encourage, namely, *early marriages*—which have always been found to form the greatest safeguard to the morals of any people, and to insure strength of character, both bodily and mental, to all generations. And in no country under the canopy of heaven can this doctrine be preached and practised with so pure and perfect a prospect of fulfilling the great law of nature as in this, the land of freedom, of peace and plenty; where the children of such parents would indeed grow up like olive branches round about their table, and be such as would be able to *replenish* the earth; their fathers the "sturdy oaks," and their mothers "the fruitful vines of God's heritage."

By the aid, then, of children and women, we might perform the labours of the farm at an expense by no means greater than that which is incurred in England, where they are both employed very extensively, with much advantage and to profit; not an objection being raised against the system. I am continually being told, the weeding of a crop, or this or that necessary operation will not pay the expense, namely, a dollar a day—true, but a quarter part of that sum would often be found sufficient to do it, and as efficiently as it could be performed by any one at any price, were it the custom to employ women and children; while the men might be engaged at a labour which would amply repay their dollar a day, namely, in throwing up compost-heaps, with lime and earth, &c., and turning and mixing, and pulverizing them until their contents had become as rich as so much leached ashes, and not unlike in smell and appearance; their value being in proportion to the labour and expense bestowed in forming them, be that what it might; every extra turning being accompanied by an extra accession of the fructifying principle, communicated at every fresh exposure to the atmosphere, by an union of the different gases liberated by fermentation, which is sure to be engendered at every turning of the mass. And on every farm will then be seen a compost-heap the size of a *house*—larger or smaller, in proportion to the quantity of land in occupation, but sufficient to top-dress completely the greatest portion of the meadow land every spring.

And now, by means of these auxiliaries, I would venture to ask, whether it be not quite within the range of possibility, that much of our hoeing could be done as cheaply and far more perfectly by hand-hoeing as by horse-hoeing?—which we know is often a very ineffectual and deceptious business, appearing at the time to have done much, but often proving to have been little better than a transplantation of the weeds, especially in a wet season. And this is not always the worst, for I have known the necessary after hand-weeding of the rows to be delayed, seeing that the intervals had been done—a business that might rather have been postponed than it. Indeed, I believe that many of us *transpose* the

proper order in the process of hoeing, which ought, I think, to be, first, the hand and hoe-weeding of the rows, and then the intervals; else, the treading of the intervals while cleaning the rows, must have the effect of re-planting the weeds that have been brought to the surface by the cultivator; whilst the cultivator itself should be *reversed*, the double row of teeth being made to *precede* — then the small furrows, which are now left near the rows of plants (by the cultivator proceeding point-forwards) will be reduced to one furrow only, that being in the centre of the interval — an arrangement of very great importance; and for the knowledge of which I am indebted to a most intelligent reader of the Cabinet—a real "book-farmer!" who not only practises, but *teaches* the best way of cultivating the mind and heart, as well as the soil.

Our late accounts from England inform us that the farmer is still further to be burdened in the shape of an income tax! Does it not strike the American farmer that there must be a monstrous difference somewhere between the two countries, to account for which, the difference in the rate of wages is by no means sufficient? Would our friends think seriously of these things, and read, mark, and inwardly digest them; then I should not fear that in summing up, the advantages in favour of this country will be exhibited as clearly as figures —"which cannot lie"—can make them.

VIR.

April 20, 1842.

For the Farmers' Cabinet.

Bee-Breeding.

MR. EDITOR,—I have, for a considerable time past, been a constant reader of the Cabinet, and have been much gratified by perusing some of the articles which it contains on that interesting subject, the culture and management of the bee. I unite with the writer in a late number, who observes, "there is nothing better calculated to strengthen our local and home attachments than a proper attention to those little matters which evince a correctness of taste, and impart a neatness to the grounds around our dwellings;" and I am convinced that one of the most interesting and profitable appendages to a dwelling, either in town or country, is a well-constructed bee-hive with a thrifty colony of bees. When I consider the vast amount of sweets that are so lavishly scattered over the face of nature, it has often been cause of surprise that there are not more of these wise and industrious insects kept by all classes of society, as they might be made the instruments for collecting a rich luxury for the wealthy, as also to add to the comforts of the poor, out of that which always has, and still is allowed to continue, to "waste its fragrance on the desert air." The principal cause why few keep bees is, that their colonies are so often destroyed by that formidable foe, the worm or larva of the wax-moth. I have studied the nature of the bee, and have had an extensive apiary for many years, and confess it has ever been a source of great discouragement to me; and after having seen a great variety of patent hives, some of them well adapted for letting the enemy *out*, after they have become fat and full by feasting on the rich treasures of the hive, and in some unguarded moment lost their hold on the comb and rolled to the bottom of the box, which consists of a slanting or swinging board, and an aperture sufficiently large to allow of their egress; and because many of those over-fed robbers are found under the hive, the principle of its construction is oftentimes admired and approved! But the main objection to these hives is, that where so great facility is given for the worms to roll out, great opportunity is afforded for the moth to get in; and although some of them might offer a *remedy* for the disease, it will readily be admitted that a preventive is better than a cure. I have therefore been induced to bend my mind to the subject, and flatter myself that I have invented a hive or palace, which will prove the title which I give it, namely, the miller-proof, non-swarming, life-preserving, ventilating bee-hive, the construction and advantages of which require only to be seen and examined to command the approbation of those who are interested in the subject. Persons wishing to purchase hives, individual, county, or state rights, will please address Joseph Sholl, near Burlington, New Jersey.

Here follows a very elaborate description of the hive, which for brevity's sake we are compelled to decline publishing; the hive itself may be seen and examined at our office, and we will take pleasure in describing its properties and advantages.—ED.

CHANGE OF CROPS.—Virgil, who was a philosopher as well as a poet, observes: "The true repose of the earth is a change of its productions." It is a curious fact, that a plant may be killed by the poison which has itself secreted, as a viper may be stung to death by its own venom. Hence it has been very generally noticed, that the soil in which some particular vegetables have grown, and into which they have discharged the excretions of their roots, is rendered noxious to the prosperity of the plants of the same or allied species, though it be quite adapted to the growth and support of other distinct species of vegetables.—*Bridgman.*

For the Farmers' Cabinet.

A Fallacy.

The popular idea of modern times, and of which our agricultural periodicals are constantly reminding the farmer, is, to cultivate no more ground than can be well manured. *Make your fields small, say they, that you may accomplish this end.*

That cultivated grounds should be well manured, at least in our older settlements, perhaps no good husbandman will deny; but while this is laid down as an axiom, it seems to be assumed as nearly equally true, that it cannot be done within the means of the farm, unless the portion of it cultivated be exceedingly circumscribed. That this assumption is entiled to the credit to which it pretends, the subscriber's experience has led him more than to doubt. He tried its blandishing promises for a few years on a large farm, to his disappointment; having soon found, after working small fields, that the amount of his manure was reduced in proportion to the size of his tillage; and then it was difficult to get back to a field of respectable size for the want of manure enough to cover it. But he has been more successful since, in practising upon the *converse* theory, viz. extended cultivation on a small farm. Five years since he confined his operations to a small farm of little more than fifty acres of arable and meadow; the land was chiefly rough, and in a very moderate state of productiveness—soil loamy, with a good healthy clay subsoil. At present the face of it is pleasing to the eye, and in point of productiveness nearly double that of the former period; only about thirty-five acres of it have been cultivated in grain and artificial grasses—the remainder in meadow, and lawn about the dwelling. Of the cultivated portion, the grasses are never suffered to lie longer than three years, frequently but two, and occasionally but one. The basis of this improvement has been, moderate attention to raising and applying manures, all within the farm, excepting lime (magnesian) and one experiment of ground bones. He manures double the space usual among creditable farmers, and last year, by the help of an extra supply of fifty loads obtained by soiling cattle before harvest, was enabled to manure one-fourth of the *whole* farm. If it be asked how so much manure is obtained, the answer is, chiefly by using *straw* for no other purpose than bedding for animals; feeding them on hay and the better portions of corn-fodder; winter-feeding a few cattle on meal and some roots; hauling most of the manure in the spring, and protecting the portion left for autumn-use under cover, or thrown into shallow banks with earth over the top; by confining the cattle in their yard altogether, until the 15th or 20th of the 4th month; afterward, during a month, let out an hour or two every day; then, and not until that period, when the grass is strong, and operating as *feed* rather than *physic*, they go upon their permanent pasture.

It will be observed, that this practice has resulted from a belief that the offal of crops is an ample basis for the manure which they require; and that, if only tolerably well managed, is capable, not only of supplying the annual exhaustion, but also of carrying on a progressive improvement. Consequently, extended cultivation, provided there be a just relation of the requisite number of animals for manufacturing the offal into manure, is believed to be advantageous to improvement of the soil, to the pocket of the husbandman, and to the country—rather than a stinted cultivation, which provides manure only in proportion to its limited extent, and looks to extensive grazing, or a disproportion of meat to the bread which is to accompany it. This just relation of tillage and of stock is supposed to be exactly that number of the latter which can be kept without eating up the source of manure-offal of the crops; and in summer without pasturing very close, animal manure being looked upon only as a small ingredient to ferment the mass of vegetable matter—and all the better for that object, when the beasts are kept in good plight, which feeding on *hay* instead of *straw* supposes—to say nothing of the superior profit of cattle so kept, and the humanity of it.

Frequent tillage, if supplied with its rights in manures, keeps the ground loose and lively for the largest product of grasses, supplying exactly what is wanted, in an abundant hay-crop for winter: and for pasturage has the utmost value, when combined with a portion of perennial or green-grass meadow, where the cattle can roam from one to the other at their pleasure.

The foregoing is contributed as matter for reflection, and not controversy. What is here considered a fallacy, viz. that a small portion of a farm cultivated, can be better manured from means within the farm than a larger portion so cultivated, being a moot point, facts on both sides is but fair play for the question. He who concentrates the manure derived from large fields upon an acre or a few acres, and thereby succeeds in producing an enormous crop, does, indeed, illustrate the kindness of our common mother in yielding a return proportionable to the food bestowed; but let him remember, that his capital or this liberal supply of food, was obtained by robbery, and by no means infers, that *space is all useless.*

J. Jenkins.

West Whiteland, 4th mo. 9th, 1842.

For the Farmers' Cabinet.

Dairy Cows.

Mr. Editor,—Having broken up my sod-ground, and believing that the corn would be better for a delay of a few days in planting, to allow the earth to become dry and warm, I thought I could not do better than take the opportunity to cross the hill and see what my Chester-county friends were doing, thinking that I should be a gainer by the journey, whether the consequences proved agreeable or otherwise — whether the lesson operated "for reproof or for comfort;" and my absence of a few days will be repaid by months of advantageous observation and years of experience. I found them on the alert, as I expected, and determined not to allow the *grass* to grow under their feet, even in those meadows which our friend Solon Robinson has immortalized by his happy remark—"If, Nebuchadnezzar-like, it should ever be my lot to be turned out to graze, may it be on such meadows as these!" — In fact, the corn had been sown in some places, and was absolutely up in others—I confess, a little to my astonishment, but not to my chagrin, as I prefer waiting a little, which I can well afford to do.

It is but reasonable to expect that the occupiers of such pastures should be good dairymen, and when I say they are, first rate, I know I shall be readily believed. I saw also several cows that would tempt some men to break the tenth commandment; amongst the rest "Bessie," the property of Paschall Morris, whose portrait you must not forget you promised to give us in the Cabinet, with an account of her great milking properties; and whose present appearance is such as to recommend her strongly to that distinction: and with her is a young progeny which bid fair to eclipse their ancestors, whether for beef or butter. I saw also very many splendid specimens of half-breds, a single cross with the Durham bull, that are real *cream-pots* in embryo, the only fear being, that in such pastures they will grow unnecessarily large for the purpose of the pail—a thing by no means desirable. Indeed, I believe that much of the complaint, so common, that the improved stock has baffled the attempts of their owners to render them regular breeders, has arisen from the circumstance of their having been kept too high in their youth; many accidents also happening at the time of calving, proceeding from the same cause. My object would be to breed them *neat* rather than *gaudy*, as there will be no fear of their laying on fat, at the time when that alone would be desirable. At some farms in these rich districts it is customary to purchase cows with their calves from Eastern droves, milk them for a season, and then turn them off to feed in the winter — an excellent practice in these Nebuchadnezzar pastures. Amongst some of them are to be found kickers of every degree, but here I learnt a cure for the disorder, when in its most inveterate state; it is, merely to place the *patient* in a stall with a beam over head, and fixing a running noose over her horns, throw the end of the rope over the beam and pull away, so as to raise her head pretty high in the air, but not so as to lift her legs from the ground: in this position she will not only be disabled from kicking, but will give down her milk without the least hesitation. These cows are also liable to the hoof-ail, as well as sore teats, both which are easily cured by the application of white paint laid on with a small brush; the body of the paint acting mechanically in preventing the action of the air on the sores, and the lead operating chemically or medicinally in drying and healing them. Care must however be taken not to apply the lead to the teats while they are suckling calves; and afterwards, caution must be used at the time of milking, but no danger need be apprehended in the hands of careful persons. In inveterate hoof-ail it might first be necessary, either to cauterize the sore, or dress with blue-stone, after which, and in all slight affections, white-lead dressing—in other words, painting the sores, will be found sufficient to effect a cure.

Now here are two recipes for the cure of some of the most troublesome diseases with which dairymen have to contend. In the first place, many first-rate milking cows have been sent to the butcher as the only cure for the disease of kicking and withholding their milk; while the hoof-ail, when once become inveterate, is almost perpetual in some dairies. The knowledge, how to cure these disorders, has cost me only a dollar and twenty-five cents in travelling expenses; but if, as I conscientiously believe, "it is more blessed to give than to receive," I shall become a gainer by the transaction—perhaps to the amount of a couple of dollars—in transmitting the recipes for publication to the pages of the Cabinet.

Your subscriber,

James Jones.

Obstacles to Improvement.

Extract from an Address by J. Garnett, Esq., before the Agricultural Society of Fredericksburg.

I have reserved until the last, the notice of an obstacle to our improvement in husbandry, which I might, perhaps, as well have omitted, since there seems to be hardly a hope, either of removing it, or of diminishing its power. The cause is, the conversion of a large portion of our female population from *stay-at-home-atives* into a tribe of wanderers.

Once, they constituted the life and soul of every domestic establishment which had any reputation for the abundance of its comforts, for the cordial hospitality with which they were administered, and for everything which made home delightful; but since their change, go where you will, you meet them, even with infants in their arms, flying to and fro over the face of the earth, or the great waters thereof, in search of something, they often know not what, unless it be to kill time and to see sights. The mighty agent of this fearful revolution is that gigantic power—steam—a power which has nearly annihilated both time and space; the instruments used, being steamboats and railroad locomotives; and so constantly are they engaged in the service, that should you wish to find any of these new converts from the stay-at-home class, the particular spot which they honour with the name of *home*, is one of the very last places on earth in which you should look for them, unless it be in the depth of winter, when ice and snow preclude all travelling, either by land or water. The inevitable consequence is, that when the females of the household are no longer found at home, their fathers and husbands, sons and brothers, must run with them, either from affectionate regard for their safety, or because they too have become infected with the wandering fever; and then what follows? Why the females abandon their domestic duties, and the men give up their farms during the busiest seasons of the year, to those whose interest it is to use them for their own special benefit. And when the want of funds compels the proprietors to a reluctant return, they find that everything has gone wrong—their orders having been totally neglected, or executed in a way so as to be productive of more harm than good. This state of things creates disappointment, which suffices to beget lukewarmness, and at length aversion to agricultural occupations; and under such circumstances, improvements in agriculture are things nearly as impracticable as the extraction of *blood from turnips or sunbeams from cucumbers!*—and it is almost folly to hope for any, unless they and their wandering families can learn once more to resume the thrifty domestic habits of their ancestors—a state of things scarcely to be expected, in these times of general suspension.

"Agriculture demands the aid of every other department of science; and from its being the source of encouragement to every other art, and the foundation of the whole structure of national greatness, it becomes the duty of every member of the profession to adopt whatever may seem fitted for extending its capabilities."

For the Farmers' Cabinet.

Permanence of Blood.

Mr. Editor,—At page 379 of the 5th vol. of the Cabinet, is an article by J. R. C., which details several very remarkable instances of what is called *breeding back*. Amongst the rest, mention is made of Mr. Gowen's famous cow Dairy-Maid, who the last year brought a white calf by a roan bull—her colour also being dark roan; and the writer adds, "it is probable that her next year's calf will be white also, unless a bull of a more decided colour shall be used." Now what will J. R. C. say, when he is informed that Dairy-Maid's calf of the present year, by "Prince of Wales," is as white as milk! Here are two white calves since the cow was put to white Colostra, showing most clearly the strength of *sympathy*, and the danger of ever using a white bull, unless the wish be, to obtain a whole dairy of white cattle. And at page 222 of the same volume, we find an account of the breeding back of that other remarkable cow, "Blossom," whose progenitor was "Comet," of white colour, and who had already brought two white calves. And then follow two remarkable instances of the same propensity in the feathered creation.

In addition to the above very curious collection of facts on this highly interesting subject, I find another, which seems to be well authenticated, and is worth preserving: it is taken from the Maine Farmer. "Forty-two years ago, a Mr. Wingate removed into Hallowell, and brought with him a polled or hornless bull and cow. The bull was sold and driven away, but a bull-calf was raised from the cow, which at two years old was shot for a bear, he being without horns and of black colour. This was some 35 or 36 years ago, and since that time no hornless bull has been with his stock, yet they have always had animals of the polled breed. Mr. Wingate has a cow that has raised two calves with horns by a horned bull, but last spring the same cow brought a fine polled bull-calf by a horned bull also! In this instance, none of the polled breed, as sires, have been with Mr. Wingate's stock for nearly 40 years, and yet the polled blood continues to show itself amongst the calves." How careful, then, ought breeders to be in their selections and crossings; relying upon it that a bad point also will lurk in the blood and make its appearance after years shall have passed away, and the circumstance be forgotten.

W. C.

One man considers himself rich, because he has money to lend at usurious interest; another, because he owns a large amount of stocks in some moneyed institution; but the farmer's wealth consists in his *rich lands*.

For the Farmers' Cabinet.

Summer Soiling.

Mr. Editor,—The readers of the Cabinet are much indebted to Mr. Jenkins for the very particular account of his interesting experiment in soiling cattle during the last summer; see page 289 of last number. The final result does, indeed, appear to have been highly satisfactory, although the way in which it was attained was both long and troublesome. With a less candid narrator, it might have puzzled us considerably to account for this, but your valued correspondent has had the magnanimity to confess that this was owing, in a great measure, to an error in judgment on his part, in selecting for the experiment a lot of cattle peculiarly unsuitable to the process of *feeding*, "being young and rough, the *refuse* of a drove purchased the previous autumn, and therefore not a fair comparison with my tenant's cattle on pasture, which were *choice animals*." Now, if experimenters generally would be honest enough to "speak out," as Mr. Jenkins has done, we should be relieved from the task which we are often subjected to, namely, that of reconciling discrepancies which otherwise are quite unaccountable; but it is not every one who can *afford* to take so lofty a stand, too many having an *end* to obtain, which is incompatible with such a line of conduct: it has been observed, "the best riders are to be found amongst gentlemen." Indeed we are much indebted to him for this impartial and important narrative, and presume there is no doubt of his continuing the plan the present year; with his acquired experience he will be "fore-armed," and in such hands, the advocates of the system need not fear, I conceive, for the result; a system which has been denominated "a carrying the crops to the cattle, and not they to the crops."

On perusing his statement, I find that "on the 30th and 31st of May, the cattle ate dry food with increased appetite, the increase of grass seeming to have given a desire for more dry food; that they again throve and improved in appearance, the first feeding with grass having produced a lank appearance and loose bowels." Now, here is revealed a secret worth knowing, and shows most clearly the advantages of a system, which gives the means of apportioning green and dry food exactly in the way best suited to their need, by which their health and well-being may be secured, and their wants correctly judged of and provided for. We know the effects of early grass on cattle while at pasture, and often witness the extreme laxity of their bowels, as well as their lank appearance, at a time when we had expected a very sudden improvement in their condition, namely, on first turning out from winter straw-yard, all which would, no doubt, be relieved by an allowance of dry food given in their stalls; and this mode of management would be peculiarly suitable for dairy cows, which, since I have read the account of the effects of limed land upon their health and condition in the paper of Vir, at p. 229 of the Farmers' Cabinet for February, I am quite prepared to consider of the highest importance to the butter, whether as it concerns its quantity or quality; a too great laxity of the bowels being, no doubt, inimical to both. The remark, that the milk cows fell off while feeding on timothy and clover, is not so easily accounted for; it might arise from the grossness and too great succulence of the crop; such food ought to be exposed for a time after cutting, to become partially wilted before feeding. It would, however, appear that the experiment was brought to a close just as the feeding of the green oats had commenced—a food of all others, it is considered, the best calculated for the purpose; and Mr. Jenkins admits that at the time of turning out, they were eating these, with timothy and clover, with gradual improvement, but that after eight days feeding at liberty on good pasture, no apparent improvement in their condition was perceptible; nay, after five days more, he adds, "very little, if any perceptible improvement in flesh since turned on pasture, with abundance before them;" all which goes to prove that these cattle were not, indeed, "a fair comparison with his tenant's choice animals, and that their want of thrift was occasioned by being young and rough, and the refuse of a drove." His remarks at conclusion speak volumes for the practice of stall-feeding; the conviction that one acre soiled is equal to four acres fed; that the cattle are more comfortable than while at pasture, shaded from hot sun and protected from heavy rains, returning without invitation or coercion to their stalls; that the dung paid all expenses of attendance, and by it he was enabled to put away into the barn 15 tons of good hay, more than could have been done, had the cattle been kept all the time on pasture, is indeed proof positive of the superiority of soiling over pasturing, and leaving no doubt at all, where cattle are to be *kept* rather than *fatted*.

Did your correspondent ever grow green corn for soiling?—the seed sown broad-cast on a well dunged soil, and the crop mown close while young, and fed in racks with the staves placed *horizontally*, not *vertically*, else the cattle could not pull the stalks out after they had grown long? It would appear that this crop must prove not only the cheapest but the best food that could be raised for the purpose, and we hear of the most decided success attending it from all quarters: it is

thus raised and expended in England, and immediately, on the crop being cleared, the land is manured and sown with turnips for winter food; an excellent plan, certainly, and likely to do much for the *quality* of a root which, with us, has often proved of little value, from its watery and meagre consistence. Indeed, I have heard of an experiment on soiling with corn which appears quite extravagant, for it is said, an acre of land sown in three divisions and at intervals of ten days each, kept 18 milk cows for three months!—the land being re-sown with corn so soon as cleared, a good allowance of dung being given at the time; the food proving most excellent for the production of the sweetest milk, and the animals keeping in superior condition. Can any of your readers inform us more particularly concerning this *universal crop?*

Mr. Jenkins has been in Europe; perhaps he could also inform us of the value of the tare for the purpose of cattle-soiling; if it could be made to succeed in this country, it would, by every account, furnish an admirable change in the diet of stalled animals; an important consideration, and one on which much of the success of such an undertaking would seem to depend. If, as is said, no plant begins to draw its sustenance from the earth until its blossoming commences—the blossoms not being furnished with returning sap-vessels (a doctrine as old as Tull), the soiling system might be pursued without exhaustion of the land—a circumstance of the greatest moment.

J. Godson.

May 3, 1842.

For the Farmers' Cabinet.

Hours of Farm-Work.

If an Englishman, an emigrant of one year's standing, could be permitted to give an opinion on a subject which all his life long has engrossed his attention, namely, the cultivation of the earth, he would say, nothing that he has witnessed in this country strikes him as more remarkable than the many hours which the labourers in husbandry, with their teams, continue their operations through the day, in a climate confessedly unsuitable to the full developement of the European constitution, and under circumstances peculiarly unfriendly to that degree of stimulus so necessary for the prosecution of an employment that requires the concentration of all their powers, oftentimes confined to one particular object, and admitting of no variation or change. He would observe, the custom in that part of England from whence he hails, is, to get early to work, and continue until one o'clock; return at that hour to dinner, and devote the remainder of the day to other services not less necessary, but which are apt to be delayed, and even to remain undone, if the whole of the day is spent in the labours of the field—what these services are, may easily be learnt, by an inspection of the condition of many of the homesteads in the country. Besides which, there is the work of *draining*—which ought to form a sort of "ne plus ultra" with every occupier of his own land in almost any situation; with road-making, &c., furnishing a perfect change—as good as a rest—of occupation for both men and cattle. What is here said does not, of course, apply to seed-time or harvest; at these seasons, all hours are made to bend to the exigencies of the occasion, and much is sometimes performed during those of the night: it is the general and uniform late hours which are here kept on a farm, that the writer conceives must often be found extremely wearisome, by their long-extended duration.

But let it not be thought that these remarks are made invidiously, or in a spirit of cavil and unkindness—no one ever crossed the Atlantic with warmer feelings, or more grateful acknowledgments of the uniform and generous treatment which it has been his fortune to experience in this "land of his adoption;" and he is quite prepared to fear, that if any of his own countrymen were to endeavour to adopt such a mode of management as is here proposed, in this country, they would fail in the attempt; for he has before his eyes many instances of ill success that have attended the introduction of European management into foreign countries, occasioned by a variety of causes which would be, indeed, "too numerous to mention." No, the extent of his desires is, to see an agriculturist of this country, of acknowledged property and standing in society, take up the plan and carry it out, and ascertain by experience, whether the thing be practicable. But, to do it justice, he must commence the year at Michaelmas—the real *New-Year* of the farmer—and finish up all his ploughing for winter fallows and spring-sowing of oats, with sod-ploughing for corn, &c., by Christmas; and after that, until the opening of spring, the work of preparation must be going on as briskly as any of the summer work; one very important item being, the periodical removal of the dung from the winter straw-yard to the field where it is to be expended, there to be turned up with muck, bank-earth, lime, &c., and be fermented and pulverized and *amalgamized* by the time it is needed for carrying abroad—a business which, in many places, requires the labour of weeks, at that busy season of the year, when *hours* are of more account than *days* of winter—in short, the winter season upon a well-regulated farm is the most important part of the year—a strange idea this to many, no doubt.

I find, in the New England Farmer, some interesting remarks on this important subject, which, although they do not exactly coincide with the plan here proposed, are valuable, so far as they go. It would appear an interesting question, why should the mechanic arts be supposed to afford the means of leisure to their votaries, while the agriculturist is doomed to "plod his weary way" for 12 or 13 hours in the day without intermission, and under a burning sun. D.

"The principles of our advice in relation to the speed of the team and hours for working your beasts, are applicable to your own labour and that of your men. We are satisfied from observation as well as experience, that ten hours per day, *in the field*, are enough—(the care of the stock to precede and follow.) In ten hours each day, *diligently improved*, most men will accomplish as much work as they can by extending the hours of work beyond that number. In other words, we know of no other farms on which so much labour is accomplished in a season by a given number of hands, as on those where about ten hours per day are spent in the field in vigorous and diligent labour. We know many who work twelve or thirteen hours—but they work more slowly, and do not accomplish a greater amount of work than those who take two hours more for rest. If one is lazy, or if his natural motions are very slow, it may take him more than ten hours to perform a fair day's work: he must make up in time what he lacks in despatch. On all farms, circumstances will occasionally make it desirable to work more hours than we have named, on some particular days; but not ordinarily. We go upon the presumption that one is to *keep at work*—busily and vigorously *at work*. Employers often think it for their interest to keep the men as many hours as possible in the field. We doubt the economy of the course. A good labourer knows what a fair day's work is, and is willing to perform it. If he knows that when he has done it, he may leave the field, he will accomplish it in ten or eleven hours; but if he must continue longer than that at his work, he will soon train himself to that slower movement which will prevent the accomplishment of the "fair day's work" before the hour when he is called from the field. This will be done from necessity rather than from any deliberate purpose."

For the Farmers' Cabinet.

Centre Draught and Subsoil Ploughs.

Mr. Editor,—I was present at the first trial of the centre draught and subsoil ploughs, at the farm of P. Reybold, jr., and saw them at work on land that had been heavily top-dressed with long manure, turning it under, with a view of preparing it for planting with peach trees as a nursery; and from the performance of the centre draught plough in that very rough land, I am induced to ask the favour of you to select me one of each kind, say one centre draught and one subsoil, of large size. The peculiar property of the Prouty plough of undermining the land-side of the furrow, is a very great matter in turning clover or other grass crops for wheat, &c., as the loose earth, so taken up and laid over, completely fills the furrow-seam, which, in our clay-lands, where blue-grass abounds, would, with the ploughs now in use, soon be filled with a luxuriant growth of grass, to the great injury of the growing wheat. The subsoil plough will, I think, be of great advantage in such land, from its property, with comparatively light force, of loosening the earth to the depth of more than 12 inches, without bringing any part of it to the surface. You will please send the ploughs for me by Hand's line, to the care of Mr. Karsner, Chesapeake city, who is keeper of the locks at that place, Chesapeake and Delaware Canal. I have a few acres of old timothy sward, that is now heavily top-dressed with long manure from the barn-yard, which I wish to put in corn and potatoes, and I want the centre draught for turning in the manure, and the subsoil for its particular province; and if I get those ploughs in time, say next week, and they should do their work well, of which I have no doubt, I should like to have them, with others, tried at the next quarterly meeting of our agricultural society, which takes place at Port Penn, early in June next.

I think, with yourself, that ploughing-matches at such meetings would be productive of much good, as the farmers would have an opportunity of comparing notes upon matters in general, and particularly on the most certain and accessible means of improving their soil, as also, of the most profitable mode of *employing* it; besides which, our mechanics, of which we have a number, excellent workmen, in this neighbourhood, would have a chance of showing off, in their ploughs and other implements, their skill and industry. And again, I am much in favour of our young men, our sons and our hired helps also, attending; they would generally be the ploughmen in such cases, and the good effect it would have would be felt at home, in the additional care they would take of their teams, and in perfecting themselves for such pleasurable feats, long before the day of trial, and without which *amusements*, if I may so call them, our young men would hardly think them worth attending — neither does your friend, J. Jones.

Wheatland, Newcastle Co. Del.

For the Farmers' Cabinet.

Ruta-Baga Turnips for Dairy Cows.

To Sam'l West, Delaware Co., Pa.

Dear Sir,—In the cars from Philadelphia to Chester the other day, in company with our valued agricultural friend of this county, John Barney, Esq., I inquired of you, as a celebrated butter maker in winter as well as spring and summer—your mode of winter feed for dairy cows—the reply was, after a sufficiency of good hay, to feed them on the *ruta-baga turnip*. I objected to the taste of the turnip imparted to the milk and butter, which you assured us could be *totally obviated* with proper care, as also the taste of garlic in the spring, in which cattle so delight. I think your experience so important, as to request further information on these subjects—you will much oblige me and other of your agricultural friends, by furnishing us *facts* which we may make known, for the public good. Very truly your friend,

Jas. W. Thomson.

Wilmington, Del. March 25, 1842.

[Reply from S. West.]

Chester, 4th month 7th, 1842.

To Dr. Thomson, Pres't. of Ag'l. Soc. of Newcastle County.

Respected Friend,—Thy favour of third month 25th, came duly to hand, and in reply to thy inquiries I will state my method of winter keep for dairy cows, so as to ensure good sweet winter butter. After a sufficiency of first-rate upland hay, I allow to each cow about a half bushel of ruta-baga turnips finely cut up—always remembering to strip the cows clear of milk *before feeding with the turnip*, and *in the morning* feeding with a different kind of food, viz., cut hay, with a little Indian meal, or other mill feed. By this process there will be no taste of the turnip, either in the milk or butter, so objectionable to many; and by it you will have a full flow of milk from your cows, and butter of a fine rich springlike quality, seldom obtained in the winter season.

And so likewise to avoid the taste of garlic in milk and butter, so common in many parts of the U. S., in the spring. You have only to strip the cows well in the morning—turn them upon your fields in which there is garlic, until noon, or 12 o'clock, then take them out and put them upon pasture where there is *no garlic growing* until evening, and then you will not detect garlic either in the milk or butter. In addition to these precautions, I put about a teaspoonful of well pulverized saltpetre in the cream-pot when filling to make butter—observing to stir it often before churning.

Thee is always at liberty to call upon me for any information in my power to give. I have no secrets to keep from my brother farmers, and believe with thee that the occupation of the agriculturist is the most honest when freed from mystery, and most profitable when those engaged in its pursuit are most willing to impart their experience and information to each other.

As ever, thy friend, Sam'l West.

To the Editor of the Farmers' Cabinet.

Kentucky Blue-Grass.

Sir,—I want information relative to the Kentucky blue-grass; can you or some of your contributors give me its botanical designation? is it the same as the green grass that grows in New Jersey? what soil does it require? does it make good hay, and will it bear frequent mowing, so as to be suitable for ornamental grounds around the dwelling-house? Answers to these questions will much oblige A Subscriber.

Answer.

Poa Pratensis, L. Smooth-stalked meadow-grass; Green grass; Blue-grass of Kentucky, but not of other districts. This is decidedly the most valuable of all our pasture grasses, and comes in spontaneously, in all our rich, calcareous soils.—*Dr. Darlington.*

Kentucky Blue-Grass. The best time for sowing is as soon as you get ready after October; or any time before the middle of March, expect a good stand.

Land. Old fields, on which the sun can exert all his powers, produce blue-grass in the greatest abundance, and best quality. Animals feeding thereon without grain, keep better and become fatter than on any other treatment; but even wood lands will produce good grass.

Preparation. If intended for old pasture, break up the fields in February, and sow oats; then sow ten pounds blue-grass seed, half a gallon of red clover seed, and if a little timothy or orchard grass be sprinkled on, so much the better; the timothy and clover or orchard grass will give a quick pasture and afford protection to the blue-grass until it gets a strong foot-hold, after which no other grass can contend with it. If wood land is to be sown, take off the logs, &c., and if the underbrush could also be removed so much the better; and after the land is cleared, harrow it well, then sow your grass seed at the rate of 10 or 12 pounds per acre, but if you put on 15 or 20 pounds, you will not regret it; the rains will sufficiently cover the seed to insure vegetation.—*West. Far. and Gar.*

Premiums

Proposed by the Philadelphia Society for Promoting Agriculture, for the Exhibition to be held on Wednesday and Thursday, the 12th and 13th October, 1842, at the Rising Sun, Germantown road.

A public sale of stock will also be held on the second day of exhibition.

Horses.

For the best thorough-bred Stud Horse	$12 00
For next best do. do.	6 00
For the best Stud Horse adapted to the field and road	10 00
For the next best do. do. do.	5 00
For the best thorough-bred Brood Mare	10 00
For the next best do. do.	5 00
For the best Mare adapted to the field and road	10 00
For the next best do. do. do.	5 00
For the best Horse Colt between 2 and 4 years old	8 00
For the next best do. do. do.	4 00
For the best Filley or Mare Colt do.	8 00
For the next best do. do.	4 00
For the best Horse Colt between 1 and 2 yrs. old	4 00
For the next best do. do. do.	2 00
For the best Filley or Mare Colt do.	4 00
For the next best do. do. do.	2 00

Neat Cattle over Two Years old.

For the best Durham Bull over 3 years old	12 00
For the next best do. do.	6 00
For the best do. between 2 and 3 years old	10 00
For the next best do. do.	5 00
For the best Bull of Devon blood	8 00
For the next best do. do.	4 00
For the best Ayrshire Bull	8 00
For the next best do. do.	4 00
For the best Alderney Bull	8 00
For the next best do. do.	4 00
For the best Durham Cow over 4 years old	10 00
For the next best do. do. do.	5 00
For the best do. between 2 and 4 years old	10 00
For the next best do. do. do.	5 00
For the best Cow of Devon blood	8 00
For the next best do. do.	4 00
For the best Ayrshire Cow	8 00
For the next best do. do.	4 00
For the best Alderney Cow	8 00
For the next best do.	4 00
For the best Cow of mixed blood	6 00
For the next best do. do.	3 00
For the best yoke of working Oxen, reference being had to their performance	10 00
For the next best do.	5 00
For the best Ox or Steer	10 00
For the next best do. do.	5 00

Neat Cattle under Two Years old.

For the best Durham Bull between 1 and 2 yrs. old	8 00
For the next best do. do.	4 00
For the best Bull of other improved breed	6 00
For the next best do. do.	3 00
For the best Durham Bull Calf between 4 mos. and 1 year old	6 00
For the next best do. do. do.	3 00
For the best Durham Heifer between 1 and 2 yrs. old	6 00
For the next best do. do. do.	3 00
For the best Heifer of other improved breed do.	4 00
For the next best do. do. do.	2 00
For the best Bull Calf of improved breed between 4 mos. and 1 year old	4 00
For the next best do. do. do.	2 00
For the best Durham Heifer Calf between 4 mos. and 1 year old	6 00
For the next best do. do. do.	3 00
For the best Heifer of improved breed do.	4 00
For the next best do. do. do.	2 00
For the best Steer between 1 and 2 years old	4 00
For the next best do. do.	2 00

Sheep.

For the best Bakewell or Leicester Buck	4 00
For the next best do. do. do.	2 00
For the 4 best Bakewell or Leicester Ewes	4 00
For the 4 next do. do. do.	2 00
For the best Southdown Buck	4 00
For the next best do. do.	2 00
For the 4 best do. Ewes	4 00
For the 4 next best do. do.	2 00
For the 4 best Lambs of any breed	4 00
For the best Merino Ram	3 00
For the 4 best Merino Ewes	4 00

Hogs.

For the best Berkshire Boar	4 00
For the next best do.	2 00
For the best Berkshire Sow	4 00
For the next best do.	2 00
For the best Boar of other breed	4 00
For the next best do. do.	2 00
For the best Sow of other breed	4 00
For the next best do. do.	2 00
For the best litter of Pigs of any breed not less than 6 in number	4 00

No animal that has previously taken the Society's first premium, will be allowed to compete in the same class.

Agricultural Implements, &c.

For the best Plough	$5 00
For the next best do.	2 00
For the best Drilling Machine	4 00
For the next best do.	2 00
For the best grain or grass Sowing do.	4 00
For the next best do do. do.	2 00
For the best Mowing or Reaping Machine	6 00
For the next best do. do. do.	3 00
For the best Straw and Hay Cutter	4 00
For the next best do. do.	2 00
For the best Root or Vegetable Cutter	4 00
For the next best do. do.	2 00
For the best Corn Sheller	6 00
For the next best do.	3 00
For the best display of Agricultural Implements	8 00
For the next best do. do. do.	4 00
For the best display of Agricultural Produce, such as grain, butter, plants, &c. &c.	6 00
For the next best do. do. do.	3 00

Any newly-invented Agricultural apparatus will be entitled to appropriate premiums.

Special Premiums

For such animals as have received the first premiums of this or any other agricultural society, accompanied with a certificate or satisfactory evidence thereof.

For the best Bull of any breed	$20 00
For the best Cow of any breed	20 00

Stock entered for these premiums cannot compete for others.

The Judges are authorized to withhold premiums where the object is not entitled to distinction; and where but one of a class is exhibited, they will award such premium as they think it merits. Those persons who intend bringing animals for competition, must inform the Committee of Arrangement before 10 o'clock on the first day of the exhibition.

Ample evidence will be required as regards the pedigree, age and character, of all stock entered for premiums.

Competition is open to the whole Union.

All stock, &c., contributed, must remain on the ground during the two days of exhibition.

Pork raising in 1842.—That you may form some idea of the profit of my farming operations in this country, Illinois, I will give you the result of my pork speculation. I purchased ten pigs a year old for fifteen dollars the lot. By feeding them with 200 bushels of corn I made them weigh 200 lbs. apiece, or 2,000 lbs. altogether. I carried seven of these to market, requiring two days with my team, and sold them at 1½ cts. per pound, *store pay*, so that the seven hogs produced twenty-one dollars in goods, equal to about ten dollars in money. I think the three I have, remaining unsold, would probably produce five dollars, and thus reimburse me for the first purchase of the hogs. Thus the time devoted to them, the expense of going to market, and the 200 bushels of corn, are the gain or loss of the transaction. —*N. Y. Tribune.*

The Farmer's Land Measurer.

TESTIMONIALS.

To James Pedder, Editor of the Farmers' Cabinet.

Dear Sir,—Your valuable little work, entitled "The Farmer's Land Measurer and Pocket Companion," forwarded to me as President of the Agricultural Society of New Castle, Del., was duly received; and at the next quarterly meeting I will present it in your name to the directors, for the Society's library, as you directed. I have perused it with care, and feel, after doing so, that it is one of those valuable and practical assistants to agriculture that requires only to be *known to be appreciated*. With this view I sent it to one of our valued and practical members, whose testimony in its behalf I take pleasure in forwarding you. The bearing this work will have, if extensively recommended, and I trust it will be, by those who write for our agricultural journals, will be, greater accuracy and approximation *to facts*, so essential in those who write for the benefit and instruction of others: it will be also highly beneficial to the young as well as the old farmer, and a great saving of time and money—both so essential to agricultural thrift. Concurring fully with Mr. Webb in all the views he has taken in regard to your work, and intending to recommend it to our members, I would advise you to appoint an agent for its sale in this city, and would suggest to you the name of *Mr. George Reynolds*, of Market street, as a proper and fit person; agricultural warehouse agent and seedsman, Wilmington, Delaware. Very respectfully, your friend,

Jas. W. Thomson.

Wilmington, April 21, 1842.

To James W. Thomson, M. D., President of the Agricultural Society of New-Castle County.

As requested, I have looked over the little book thee sent me, entitled "The Farmer's Land Measurer, or Pocket Companion," and find it a very valuable *companion* indeed—one which I think every practical farmer, after he hears of it, will feel an interest and a pleasure in becoming acquainted with.

The calculations being made in *yards* instead of rods, the farmer with his little book in his pocket, is always ready to measure and lay off his field into lots for any purpose he may desire. Almost any man can step a yard near enough for common purposes, and when the width of the field is known, he can in a few minutes, by the help of the tables, measure off one, two, three, or any number of acres, to plant with potatoes, turnips, or sow with seed, or for the equal distribution of manure; when the heaps in a load are determined on, the tables give the distance they must be from each other, in order to distribute a certain number of loads per acre.

The book contains other information, interspersed with valuable observations and remarks on the subject of farming, and I feel a pleasure in recommending it to the patronage of agriculturists generally. It is by Jas. Pedder, the worthy and indefatigable Editor of the Farmers' Cabinet, and for his benefit and those purchasing the work, I hope it may find a circulation equal to its merits. Very respectfully, thy friend,

Benj. Webb.

Wilmington, 4th mo. 21, 1842.

The Farmers' Pocket Companion is just such a little work as was needed in this country; I hope it will, as it ought, meet with an extensive sale. It must be to the farmer as convenient as Rowland's interest tables to the accountant; I am disposed to publicly recommend its use. Solon Robinson.

Lake Court-House, Indiana, April 13, 1842.

I have examined with pleasure "The Farmer's Land Measurer and Pocket Companion;" it is just the book all farmers should have, and is what I have often wondered was not got up. T. B. Skinner.

Washington, April 1, 1842.

My eldest son has just commenced farming, and the first present I made him was the very useful little manual, "The Farmer's Land Measurer," as a "Pocket Companion." It is my opinion that every farmer when at home—as every farmer ought to be at this season—should carry a copy of it in his pocket. J. S. Skinner.

Washington, May 3, 1842.

We consider the book a good one—an excellent one, as being both practicable and useful in its applications; and being influenced by a proper sense of its intrinsic worth, we advise every farmer and planter to buy a copy.—*American Farmer.*

Published by Thomas, Cowperthwait, & Co., Philad. Sold by D. O. Prouty, Market street; Kimber & Sharpless, and office of the Cabinet, 50 north 4th street, Philadelphia; George Reynolds, seedsman, Wilmington, Delaware; and F. Taylor, bookseller, Washington, D.C. Price 50 cts.

Notices.

"A Farmer" will find his inquiry for the best machinery for the purpose of crushing and pressing the corn-stalk in the manufacture of sugar, fully answered in Mr. Webb's essay, at p. 307 of the present number.

"P. J's." letter of inquiries would have been more *welcome*, had he not forgotten to pay postage; as it is, however, we shall perform *our* duty by informing him, the Bull which was exhibited at the Philadelphia Agricultural monthly meeting, on Wednesday, is the property of Dr. George Uhler, Kensington; his age, 3 years; *sire*, Colostra; dam, imported Cato; name, Sam Slick; weight, 1932 lbs.; took the first premium at the Philadelphia Agricultural Exhibition in the year 1840. The price may be known by addressing a line, *post paid*, to the owner.

The quantity of rain which fell during the 4th month (April), 1842, was ..... 5.3 inches.

Pennsylvania Hospital, 5th mo. 1, 1842.

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